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**THE PRINCIPLES AND
ARITHMETIC OF
FOREIGN EXCHANGE**

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THE PRINCIPLES AND ARITHMETIC OF FOREIGN EXCHANGE

In Two Parts:

1. The Principles of Foreign Exchange
2. The Arithmetic of Foreign Exchange

BY

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PREFACE

ALTHOUGH this volume is presented as the sixth edition of a work which has come to be regarded as a standard text-book on Foreign Exchange, it will be seen that there is little that is common to this edition and those which have preceded it, except the title and the arrangement of the chapters.

It is my aim to maintain this book as the most up-to-date and comprehensive work on the theoretical and practical aspects of Foreign Exchange, and to this end previous editions have been regularly and thoroughly revised. In this edition, more radical treatment than usual has been necessary. The world crisis of 1931, the departure of Britain and other countries from the gold standard, the manifold forms of interference which intense nationalism has imposed on the exchanges of all countries, and the never-ending changes in practice, induced me to undertake an almost complete re-writing of the book, while, with the object of making the work as useful as possible to students and to those who are engaged in the daily practice of Foreign Exchange, much new matter has been introduced, and a large number of new arithmetical examples have been incorporated.

In the face of present instability and continual change, it is necessarily difficult to discover the basic theory of Foreign Exchange. To many whose experience and knowledge date from the war period, the present conditions of fluctuation and disturbance must appear to be the *normal* state of exchange affairs, and it is not easy for such students to visualise the state of equilibrium which existed before the war of 1914-19 wrought havoc with the economic organism. But whether we are considering pre-War or post-War conditions, there is only one theory which can explain the working of the exchanges. The same principles apply whether conditions are normal or abnormal

—in normal conditions, the exchanges are in equilibrium; in abnormal conditions, equilibrium is never reached.

The one theory which satisfactorily explains the Foreign Exchanges is that known as the Purchasing Power Parity Theory, which, of all exchange theories, goes to the heart of things. It is for this reason, and because a knowledge of this theory is essential to a clear understanding of the fundamental problems of Exchange and Currency, that I have made this the approach to my study of Foreign Exchange.

Even while I write this Preface I am aware that conditions are changing—restrictions which are imposed one day are removed a few days later, and it is difficult to estimate economic effects when authoritarian interference diverts the operation of economic forces. Hence my chapters on Exchange Control and Restrictions, on the World Crisis and on the Problem of the Gold Standard, though true to the facts as they exist at the time of writing, must be regarded as tentative; so, also, the conclusions suggested by those facts.

My thanks are due, as before, to many readers, students and business associates for numerous suggestions for the improvement of this work, but I wish, in particular, to acknowledge my indebtedness in this respect to Mr. H. C. F. Holgate, of Lloyds Bank (Foreign Exchange Department), for affording me the benefit of his wide and valuable experience, and also to Mr. D. H. P. Cannon, Mr. A. T. Hoddle and Miss M. Selare, B.A.(Leeds), who have given me much valuable help in the preparation of this edition.

September, 1934

S. E. T.

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PART I

THE PRINCIPLES OF FOREIGN EXCHANGE

CHAPTER I

THEORY OF THE EXCHANGES

FOREIGN EXCHANGE is that branch of the science of Economics in which we seek to determine the principles on which the peoples of the world settle their debts one to the other. If all the nations used the same kind of money, for example, sovereigns or dollars, our task would be a fairly simple one, for an exchange between two nations, or between two individuals of different nationality, does not differ fundamentally from an exchange between any two citizens of the same State. Complications arise, however, first, from the fact that, as different countries are separated from one another by varying distances, the transfer of money from one to the other involves expense and delay which means that money "here and now" is always worth more to a creditor than the same amount of the same money in a country 1,000 miles away; and, secondly, from the fact that practically every nation has a distinctive money or currency unit of its own, differing from the moneys of other nations, not only in name but also in design, size and intrinsic worth, while each of these units functions as money only in the country in which it is issued. America amasses her enormous wealth in terms of the "almighty" dollar, while Spain spends hers in terms of the "peseta". We in Britain pin our faith and base our currency system on the pound sterling, which we try to keep tied to the solid foundation of the gold sovereign or of its equivalent weight in gold, whereas Chinese merchants, despite the attempts of Governments to establish a uniform legal coinage, still continue to buy and sell their goods in terms of

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a *weight* of silver known as the *tael*, the metallic content and worth of which vary in every province—indeed in almost every district.

There would be complication enough if the nations of the world were content merely with this endless variety, but still further difficulties arise from the fact that the same name is sometimes used by different States for monetary units of entirely different form and value. The gold *dollar* of the United States is the dignified head of quite a large family of monetary units bearing the same name, including the silver dollars of Hong-Kong, of Indo-China and of Mexico, and the gold dollars of Cuba and of British Honduras. Similarly, the Argentine *peso* has several relatives of similar name but of varying form, size and importance, including the pesos of Chile, Colombia, Uruguay and Salvador.

The Central Problems of Foreign Exchange.—The exercise of a little imagination will at once indicate some of the problems which must result from the existence of such a variety of currencies. Brown of London who buys £100 worth of goods from Black of Liverpool can settle his debt quite simply and quickly by the despatch to Black of a cheque drawn on his bank. Brown could, of course, send Black £100 in coin or notes, or he could send a banker's draft. But if Black knows Brown sufficiently well, he will have no hesitation in accepting a cheque for the amount due. The cheque is paid by Black into his account at his own bank, and it is thereafter collected and paid through the Bankers' Clearing House. Payment of such internal debts as this is thus effected, without the passing of any actual coin or currency notes, merely by the transfer of funds from an account in the books of one bank to an account in the books of another bank.

But suppose for a moment that Mr. Black of Liverpool becomes Monsieur Noir of Paris. Monsieur Noir buys and sells in terms of French *francs*, and does not in the ordinary course expect to receive payment in terms of pounds sterling. If then Monsieur Noir sends Brown goods which are invoiced at, say, 10,000 francs, Brown will be faced with the following problems:—

1. How and where can he obtain 10,000 francs, and how can he pay them over in Paris to Monsieur Noir?
2. How many pounds must Brown pay in London for those francs to be delivered to his creditor in Paris? What is the equivalent in sterling of 10,000 francs to be paid in Paris, and how is this equivalent determined at any particular time? In other words, on what basis do pounds exchange for francs?

These are the main problems which we shall attempt to solve in the following pages, and as we proceed we shall find that Foreign Exchange, which investigates the principles on which nations settle their debts, resolves itself into an investigation of the *principles which govern the exchange of the money of one country for that of another.*

The Expression "Foreign Exchange".—From a purely practical standpoint, the term "Foreign Exchange"—and the plural expression "Foreign Exchanges"—connotes the *mechanism or organisation* whereby world currencies exchange, the *system or the business of* exchanging currencies, i.e., all those operations and transactions which spring from the exchange of different moneys.

But, as we shall see later, these terms are very frequently used in the daily Press to mean the actual *ratios or rates* at which currencies exchange one for the other, in which sense it is more correct, and certainly less confusing, to refer to the *Rates of Exchange*. It is also not at all unusual to find the expression "Foreign Exchange" used in the sense of "foreign money". During recent years our newspapers have referred frequently to the orgy of speculation "in foreign exchange", by which, of course, they mean speculation in foreign currencies or foreign moneys. In the same sense, central banks are said to hold part of their assets "in foreign exchange" and to have the option of converting their notes into "foreign exchange", the meaning, in both cases, being *rights to money* in foreign centres. Again, banks in London and other financial centres are said "to buy and sell foreign exchange", by which is meant that they buy and sell foreign currencies existing as credit balances in other centres, or as bills of exchange, bank notes and other remittances payable in other countries.

MONEY AND ITS VALUE.

The Meaning of "Money".—Since the business of foreign exchange consists in the exchange of one currency or money for another, it is necessary to understand at the outset precisely what is meant by the terms "currency" and "money". In this book the term "money" is used in the sense of *anything which is widely used and accepted as a means of exchange*, and thus, in our own country, it would include gold, silver and bronze coins, Bank of England notes, cheques and bills of exchange. "Money is a kind of claim upon all other members of the community; a sort of order or promise to deliver which can be enforced whenever the owner pleases. It is a means to an end, held temporarily, not for its own sake, but as a means of obtaining other articles or of

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commanding the services of others. Money enables the consumer to generalise his purchasing power, and to make his claims on society at the time and in the form which suit him best.” *

Though there are several different forms of money in circulation in most communities, the majority of countries have established one form or type as the *standard money*, i.e., as the basis of all values. For this purpose some countries have adopted gold, whilst others have used silver; and the national currency unit, or the national *unit of account*, in terms of which the wealth and debts of the people are expressed, is fixed by law as representing a specified weight of the standard metal, which may or may not be minted into a coin.

In Britain, for instance, the standard metal is gold, and the standard coin is the sovereign containing 113·0016 grains of *pure* gold; but, though sovereigns have in the past been in wide circulation, they are not now minted, and in this country, as in others, the standard coins are only of importance as a legal basis of the currency generally. Indeed, in some gold standard countries the unit of account has never been minted as a gold coin, but the law—in order to provide a fixed basis for the currency—provides that the unit of account shall be regarded as equivalent to a specified weight of pure gold.

Currency and Money.—The term “currency” is frequently applied to any medium of exchange which is used within the boundaries of a State, and thus includes coins, bank notes, and such credit instruments as cheques and bills. But it is best applied in a more restricted sense to the form of money *which is issued by the State*, and which is regarded as the *current* medium of exchange by virtue of the Government authority behind it. In Britain, Bank of England notes (and gold coins when they are available) are properly regarded as currency, but bills and cheques are not current in the sense that they are universally accepted and received in payment. When we speak in foreign exchange of “the purchase and sale of a country’s currency”, we are really referring to the purchase and sale of bills, cheques, drafts, etc., all of which represent *rights* to the currency in which those instruments are expressed.

Legal Tender Money and Token Money.—*Legal Tender* is that form of money which must be accepted by a creditor when it is offered by a debtor in final discharge of a debt or in full payment for commodities or services. In Britain, gold sovereigns, half-sovereigns, and Bank of England notes of 10s. and upwards are *unlimited*, or *full*, legal tender, i.e., they are legal tender for the payment of any amount.

* S. Evelyn Thomas, *Elements of Economics*, 6th ed., p. 388.

But as gold coins have not circulated for some years, the chief legal tender currency in this country consists of Bank of England notes, which, being ordinarily convertible into gold on the basis of the legal gold content of the sovereign, are normally representative of the standard money.

Of course, when the convertibility of Bank of England notes is suspended (as it is at the time of writing), their connection with the metallic standard is severed and they no longer have any direct relation to the standard money. This question will be more fully considered in a later chapter.

Payments of small amount are facilitated by the issue of *token money*, so called because its face value is greater than the actual commodity value of the material from which the money is made. This material may be paper, but is usually an alloy of some of the less valuable metals such as silver, tin, nickel and copper. Strictly speaking, all paper money is merely token money, but the term is not ordinarily applied to paper money which functions in place of the standard currency and is exchangeable on demand into such standard currency, as, for example, the Bank of England note when Britain is on the gold standard.

Token coins are maintained in circulation because (a) only sufficient are issued to satisfy the requirements of the community for making small payments; (b) they are more valuable as coins than as bullion, and (c) they are made legal tender for limited amounts only within the boundaries of the issuing State. For these reasons token coins are not, as a rule, of importance from the point of view of foreign exchange.

In Great Britain, both silver and copper coins are *limited* legal tender, the former for payments up to forty shillings, and the latter for payments up to one shilling.

The Importance of Money in the Modern Community.—It is not necessary to enlarge upon the great importance of these different forms of money to the civilised community. Without them, the exchange of goods and services on the modern scale would be almost impossible. But money, in whatever form it exists, is not required for itself alone. Its value to man and its purpose in the modern world spring from the work it performs in facilitating the transfer of goods and other utilities.

Trade is Still, in Essence, Barter.—For trade, whether internal or external, is still in essence the original act of barter. All that gold, or any other medium of exchange and measure of value, has done is

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to simplify the bartering. It is easier to take in exchange for an article a sovereign, or a Bank of England note representing a sovereign, and then, perhaps weeks hence, to exchange the sovereign or the bank note for some other article you need, than it is directly to exchange the one article for the other. Similarly it is easier to exchange a cargo of wheat for its equivalent value in machinery by means of a bill of exchange expressing that value in terms not of machinery but of gold. Gold is a store of value, not, it is true, as stable as we could wish, but more stable than most materials, and we can either keep our wealth in that form or at any time exchange it for an equivalent value in any other form of wealth. The world's trade (at least the trade between gold standard countries) has been built up on value expressed in gold and has long been conducted on the basis that, if desired, gold would be forthcoming if it were demanded by a creditor from his debtor. But no one except a miser desires to store up mere gold. Gold has a limited value in itself for use in the arts and for personal adornment, but its real value is the food, clothing, houses, and all the utilitarian, physical, æsthetic, intellectual and moral good for which it can be exchanged.

The Real Value of Money.—How then is this *real* value of money determined at any particular time? How do we judge whether the money for which we exchange our goods and our services is really worth what we give for it? We shall see later that the answers to these problems lead us to the very basis of foreign exchange theory. At this point it will suffice to observe that the real value of money to us is *what we can get for it* in the form of things which we need—food, clothes, books, warmth, light and enjoyment. If we get more of these things to-day per £1 than we could get in 1920, when prices were high, then we conclude that money has a greater real value to us to-day than it had in 1920.

We express these facts more technically by saying that the value of money, in whatever form it exists, whether as dollars, pounds, francs or pesetas, is its *purchasing power* in terms of the goods and services of others. People in America, or France, or Germany, at any particular time estimate the value of their money by its *internal purchasing power or command over goods and services*.

Now, this purchasing power, or the value of a currency as money, quite obviously *varies inversely as the general level of prices*. If ten books cost £1, the value or the purchasing power of the pound in terms of books may be stated to be ten books and each book costs 2s. If the price of the same book is put up to 2s. 6d., only eight can now be

purchased per £1, and the value or purchasing power of the pound in terms of books has fallen. More generally, we say that *when prices rise the value of money falls*, since less commodities can be obtained for each unit of money. Conversely, *when prices fall money becomes more valuable*, since each unit will purchase more commodities than previously.

It follows also, in accordance with the Quantity Theory of Money, that the more money we have available in relation to the total quantity of commodities and services we wish to exchange, the less will be the value of our money and the higher will be the price of the commodities and services. If the quantity of money in a country is suddenly doubled, while the quantity of commodities remains constant, then the price of those commodities will also be doubled, for there will now be twice as much money available to do the same "money work". On the other hand, if the quantity of money available is halved, while the quantity of commodities remains constant, then money will be twice as valuable as it was before, i.e., the prices of commodities will show a fall of 50 %.

In putting the theory in such elementary form we are, of course, ignoring a number of important reservations, as, for example, that the velocity of the circulation of the available money must, of necessity, influence its value in relation to the commodities exchanged. If we pass each piece of money from hand to hand in payment for goods and services twice as fast as we did before, then each money-unit does twice as much of the money work as it did previously, and the result is the same as if the quantity of money had been doubled; i.e., the value of money falls and prices rise by 100 %. But such refinements do not affect the fundamental truth which it is essential to understand at this point—that the value of money tends to fall as its quantity is increased.

Clearly, it is to the advantage of any country to maintain the value of its money, and consequently the general level of its prices, as stable as possible. Changes in the value of money have a disturbing influence on trade and production, while they interfere with the relationship between debtor and creditor. The ideal condition is that a country should have sufficient money to enable its internal exchanges to be carried out efficiently and quickly. If for any reason more money than this is available, the value of that money will fall and prices will rise. Conversely, if the community has less money than is required for its working needs, then, other things being equal, the value of the money available will be high and prices of commodities will be low.

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How the Value of Money is Indicated.—Since money is itself the measure by which the value of all other commodities is determined and expressed, it follows that we have no absolute standard by which we can measure the value of money itself.

We cannot say that at a certain time the purchasing power or value of a given currency is 138*x*, or 72*x*, where “*x*” is a standard measure like feet or grammes enabling us to say that a table measures 3 *feet*, or that a coin weighs 10 *grammes*. And apart from this, the peoples of the world spend their money in such a large variety of ways, their standards of comfort and convenience are so different, and the estimation they place on any particular commodity is capable of such variation, that it is almost impossible to fix on any accurate basis for comparing the internal value of one currency with the internal value of another. Nevertheless, if we choose a representative group of articles on which the money of the inhabitants of a certain country is regularly spent, and determine the prices of those commodities at different times, we can compare the prices at one time with those at another and form a fair (but not an *accurate*) idea of any changes in the general level of prices, i.e., in the value of money, which have taken place between the times in question. This method is that adopted in the formation of what is known as a *Price Index Number*.

Compiling a Price Index Number.—A Price Index Number is calculated by choosing a number of representative commodities in daily demand within the community, allowance being made by a method known as “weighting” for the relative importance of the various commodities in the average expenditure of the inhabitants. The prices of these commodities in a year or other period taken as the basis are then determined and totalled. The total is equated to 100, and that figure is taken as an *index* or guide to the general purchasing power of the particular currency for the period in question. In subsequent periods the prices of the same commodities are obtained as nearly as possible in the same way, and their total is expressed as a percentage of the total for the base period. If the resultant figure is less than 100, a fall in prices is indicated; if the figure is greater than 100, the general level of prices must have risen.

The most important index numbers of general prices in this country are those of the Board of Trade, the *Economist* and the *Statist*.

The *Economist* price index, a specimen of which is given here, is compiled by taking the average *wholesale* prices of fifty-eight commodities distributed into five groups, viz., (1) cereals and meat; (2) other foods; (3) textiles; (4) minerals; and (5) miscellaneous.

The base year now taken is 1927, and the price indexes for subsequent years are shown as a percentage of the index for this base period. But any other year can, of course, be taken as the base period by equating the index number in that year to 100, and adjusting the indexes for subsequent years as a percentage of the base index. Thus, in the second table appended, the index numbers are shown with 1913 as the base period, and so afford an instructive comparison between prices in the last pre-war year and prices in recent years.

"Economist" Wholesale Price Index.

(*"Economist" Commercial History and Review of 1933.*)

Date.	Cereals and Meat.	Other Foods.	Textiles.	Minerals.	Miscel- laneous.	Complete Index.
1927 = 100.						
<i>Average, 1928</i>	103·6	93·8	105·1	92·1	95·8	98·1
.. 1929	96·9	85·8	92·2	95·6	90·5	92·4
.. 1930	81·0	77·2	64·4	83·6	81·6	77·6
.. 1931	68·7	65·3	50·0	73·1	68·4	64·9
.. 1932	68·2	62·5	49·2	72·9	61·9	62·6
End. Jan. 1933	64·3	60·1	48·0	73·0	61·1	60·9
.. Feb. 1933	63·5	60·4	45·8	72·8	60·1	60·0
.. Mar. 1933	63·4	57·8	45·9	73·1	58·9	59·3
.. April 1933	64·7	57·9	48·8	74·9	62·0	61·4
.. May 1933	64·4	57·7	51·9	80·3	65·5	63·6
.. June 1933	64·7	58·0	54·0	81·0	68·2	65·0
.. July 1933	64·7	58·8	54·1	79·8	69·9	65·3
.. Aug. 1933	66·1	59·7	53·7	79·4	69·4	65·5
.. Sept. 1933	65·0	60·8	52·7	79·3	68·6	65·0
.. Oct. 1933	64·0	58·9	51·8	78·6	67·8	64·0
.. Nov. 1933	63·1	57·5	50·8	77·3	67·5	63·1
.. Dec. 1933	64·5	56·7	53·3	77·4	68·1	63·9
<i>Average, 1933</i>	64·4	58·7	50·9	77·2	65·6	63·1
1913 = 100.						
<i>Average, 1927</i>	139·9	159·3	153·9	121·6	124·6	137·6
.. 1928	145·0	149·4	161·7	111·9	119·3	135·1
.. 1929	135·6	136·8	141·9	116·2	112·7	127·2
.. 1930	113·4	122·9	99·1	101·6	101·5	106·8
.. 1931	96·1	104·1	77·0	88·9	85·3	89·3
.. 1932	95·4	99·6	75·7	88·6	77·1	86·1
.. 1933	90·1	93·5	77·6	93·9	81·7	86·8

The *Statist* index number is based on the average *wholesale* prices of forty-five commodities, distributed in six different groups (1) vegetable food; (2) animal food; (3) sugar, coffee and tea; (4) minerals;

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(5) textiles; and (6) sundries, in the standard period 1867-77. Average prices during that period having been equated to 100, rises or falls in the level of wholesale prices in subsequent periods are shown as a percentage of the index number (100) for the base period.

Index numbers of wholesale prices are published in all other important countries, and, though they are compiled in different currencies and are based on factors which differ considerably one from the other, it is possible to obtain a very fair comparative view of the movement of prices in the various countries by equating their price index numbers to the same base period, as is done in the table opposite, also from the *Economist*.

While the method of index numbers is very useful for purposes of comparison, it makes no pretence to absolute accuracy. A price index number is merely an approximation, and is not in any sense an absolute standard measure like the yard or kilogramme. The commodities chosen vary considerably in quality and description over a period of years, while their choice is, of course, purely an arbitrary one, although it is necessarily made only after great care and deliberation. Then again, of the infinite variety and number of commodities bought and sold, only a very small proportion are taken into account in making up an index number, while, if we are comparing the purchasing powers of different currencies, we cannot ignore the fact that goods differ considerably as between countries in description, form and degree of attractiveness to the purchaser. The distribution of income among commodities varies widely from one generation to another; the luxuries of one generation become the necessities of the next. Standards of living change, involving redistribution of income, and modifying the relative importance of commodities in the average budget.

Moreover, index numbers of wholesale prices (such as those of the *Statist*, of the *Economist* and of the Board of Trade) vary to a much greater extent than would be the case if they were based on retail prices, and, as they do not include the payments which have to be made for such items as rent, fuel and clothing, they do not give a fair indication of changes in the prices of things on which a large part of the national income is spent. For this reason *Cost of Living Index Numbers* having retail prices as their main factors (such as those of the British Ministry of Labour and of the United States Bureau of Labour) are compiled with a view to affording more accurate information concerning changes in the living costs of average families (see Table, page 11).

Index Numbers of Wholesale Prices in the Various Countries, 1913-34.
(The "Economist" Monthly Supplement, 24th February, 1934.)

WHOLESALE PRICES.

Monthly Average.	United Kingdom.		Dol. gold mark.	France.	Germany (official).	Holl. (Holl.)	Italy (Holl.)	Sweden (Holl.)	Australia.	British India.	Canada.	South Africa.	Japan.	United States Bureau of Labour.
	Board of Trade.	Economic.												
1913	100.0	100.0	d	e	100.0	100	100	100	100.0	100	100.0	100.0	100.0	100.0
1914	126.5	127.2	121	120	127.2	142	146	140	141.2	141	149.4	116.0	166.2	136.5
1915	119.5	106.4	104	130	124.6	117	125	122	126.5	117	135.3	102.6	136.7	123.8
1916	104.1	89.5	678	114	110.9	97	107	111	109.7	96	112.6	99.5	115.6	104.6
1917	101.6	86.1	542	117	96.5	79	104	109	96.0	91	104.2	91.5	121.7	92.8
1918	100.9	86.9	501	125	93.2	75	107	107	91.0	87	104.9	91.6	135.6	94.5
1919	100.3	81.2	521	117	91.0	75	107	106	91.3	88	99.8	87.3	139.5	87.4
1920	98.9	82.7	512	124	91.2	74	106	106	91.1	86	99.3	87.3	135.7	85.7
1921	97.6	81.5	504	128	90.1	72	105	105	90.0	83	100.0	87.3	134.0	86.2
1922	97.2	81.5	501	122	90.7	71	105	105	91.1	84	102.2	90.0	133.1	86.5
1923	99.2	87.5	502	123	91.9	72	107	106	91.2	87	104.5	87.3	133.6	89.8
1924	101.7	89.5	507	123	92.9	73	107	106	91.2	89	105.6	87.3	135.7	93.1
1925	102.3	89.9	506	125	92.9	73	107	106	91.7	91	110.1	95.3	137.6	99.7
1926	102.5	89.7	501	126	92.7	73	107	106	90.9	89	108.4	87.3	136.0	99.6
1927	103.0	89.5	496	128	92.7	73	107	106	90.4	88	107.6	87.3	137.8	101.4
1928	102.6	89.1	489	127	93.7	75	107	106	90.7	88	106.1	93.1	136.3	102.0
1929	102.8	86.4	485	128	96.0	76	107	110	91.0	88	107.3	87.3	135.0	101.9
1930	102.4	84.0	484	129	96.2	76	107	110	91.3	89	107.8	87.3	132.6	101.6
1931	104.0	90.1	—	130	90.5	—	—	—	—	—	—	106.0	132.4	103.1

a End of the month. b 16th of month. c Official. d Second half of month. e 1914. f New index: 126 articles included.

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Price index numbers, then, give only an imperfect indication of the purchasing power of a currency, and, at best, that indication is only relative; we can compare one index number with another and say that the purchasing power of a currency has changed, but we have no standard or fixed basis of comparison. But so long as we appreciate

Index Numbers of Retail Prices in Various Countries, 1929-34.

(The "Economist" Monthly Supplement, 24th February, 1934.)

Cost of Living—(Base = 100).

	United Kingdom.	Belgium.	France.	Germany.	U.S.A.
Number of Towns and Localities	630	59	Paris	72	Whole Country
Base	July, 1914	1921	1914	October, 1913, January, April, June, 1914	1923
1929—Monthly Average	164	220	556	153.8	100.0
1930—Monthly Average	158	228	581	147.3	98.2
1931—Monthly Average	147	204	569	135.9	86.7
1932—Monthly Average	143	184	526	120.9	77.7
1933—Monthly Average	143	182	520	118.5	74.8
1932—December ..	142	188	516	118.4	75.1
1933—January ..	141	186	—	117.4	73.7
February ..	139	187	—	116.9	72.1
March	137	183	523	116.6	71.8
April	136	181	—	116.6	71.5
May	136	177	—	118.2	72.1
June	138	177	516	118.8	72.8
July	139	177	—	118.7	75.2
August	141	179	—	118.4	76.9
September ..	141	182	516	119.0	77.9
October	143	183	—	119.8	78.0
November ..	143	183	—	120.4	77.8
December ..	142	183	526	120.9	77.3
1934—January ..	141	—	—	120.9	77.5

these imperfections, we can use the index numbers published in the various countries as an indication of the changes in the purchasing powers of the respective currencies from time to time, while, with this explanation of the meaning of money and of the use of index numbers before us, we can proceed to investigate the basis on which the intricate business of foreign exchange is conducted.

BASIS OF FOREIGN EXCHANGE.

How Foreign Exchange Arises.—Foreign Exchange arises from international commerce, which comprises the interchange of commodities or services between peoples, or, in other words, the transfer of wealth in all its forms from one country to another. No country exists in complete isolation from the rest. Manufacturing nations draw food-stuffs and raw materials from countries where they are grown or produced, and these, in turn, depend upon the manufacturing nations for clothing, machinery, and other manufactured goods. "England to-day feeds herself in her factories, and Canada clothes herself in her fields." * British ships carry Welsh coal, or Bradford cloth, or Manchester cottons, to Buenos Aires or Rio, and other British ships leave those ports laden with meat or cereals to feed the miner and the artisan of Yorkshire and Lancashire. We call this ceaseless interchange of goods between peoples buying and selling; and buying and selling give rise to debts.

But international debts arise in ways other than through the buying and selling of goods, although that is by far the chief cause. The services rendered by the British Mercantile Marine in carrying goods to other countries create debts which must be paid to our carrying companies by the countries importing the goods. When a foreign country contracts a loan in London, say, for the purpose of purchasing new railway equipment made in Leeds, the interest on the loan is a half-yearly debt due to London. A broker on the London Exchange, selling for a Paris holder, e.g., £1,000 of our 3 % Conversion Loan, is instrumental in creating a debt to the extent of his contract note, due from London to Paris. Similarly, if he buys the same stock for a Paris investor, a debt becomes due from Paris to London, but there is also a recurring debt due by London to Paris, for interest on the investment, so long as the stock is held in Paris. The foreign tourists who flock annually to this country, and cash Letters of Credit addressed to our bankers here, all create so many debts, small perhaps individually but in the aggregate amounting to a very large sum, due to London from the countries of their domicile. So, too, the British tourist, changing a £50 note of the Bank of England in Rome to pay for a month's tour in Italy, creates to that extent a debt due from London to an Italian banker. Thus in these, and in many other ways which will be explained later, the countries of the world are continually incurring debts one to the other, and it is the discharge of these debts

* *The Economic Foundations of Reconstruction*, by Alfred Milnes.

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which brings into play what are compendiously called the Foreign Exchanges.

The Settlement of International Debts.—The settlement of the debts which thus arise must be effected in a way satisfactory to both debtor and creditor. The obvious, but far from the simplest, way to do this would be for the debtor to transfer to his creditor an amount of gold equal to the amount of the debt, for gold is universally recognised as a valuable and easily exchangeable commodity which a creditor in any country is perfectly satisfied to accept. Gold functions as an international currency, and the only essential to its use for the payment of a debt is that both parties shall be agreed as to what weight of gold constitutes a fair payment. It was on this basis that settlements between two countries were effected in the early days of international trade. The precious metals were sent to and fro in payment of international indebtedness and their value was determined primarily by weight.

A little consideration will show that this method could be adopted in the case discussed in an earlier paragraph, where Mr. Brown of London is indebted to Monsieur Noir of Paris for goods worth 10,000 francs.

In ordinary circumstances, the Bank of France will give a fixed price in francs for all gold offered to it, so that our Monsieur Noir would be perfectly satisfied if he received from Brown in payment for his goods a quantity of gold which would realise 10,000 francs on being sold to the Bank of France. In pre-War days Brown could have arranged to have sent this gold in the form of sovereigns obtained from the Bank of England, but to-day gold sent from London would probably take the form of ingots of the metal purchased from the London Bullion Market; both forms would be quite easily exchangeable in Paris for the requisite number of francs.

There are grave drawbacks, however, to the use of gold in this way for ordinary trade payments:—

- (a) The transmission of gold is so troublesome and expensive, as well as being attended by such serious risk of loss, that it is impossible to use the metal for any and every type of international payment.
- (b) The total amount of gold in existence is not nearly enough to cover all transactions.
- (c) Gold is required for other important purposes, e.g., for internal currency (though that use is now almost in abeyance), for reserves against note issues and for industrial uses.

- (d) Commerce could never be carried on to anything like the present extent if each international debt had to be settled independently of all the rest by payment in gold. The commercial methods of the early Middle Ages are impossible to-day.

Credit Instruments and Credit Transfers.—These drawbacks to the use of gold were overcome by the discovery that the use of the precious metals could be vastly economised, and that international settlements, however large, could be effected conveniently, smoothly and successfully by the use of credit instruments, which are paper evidences of the debts payable in the various currencies of the world, and (between gold standard countries) are also promises to pay gold which do duty for the actual metal.

Use of the Credit Instrument Exemplified.—The great utility of a credit instrument is that it saves a debtor trouble and expense by enabling him to pay his creditor, not directly, but by transferring to him money owed to the debtor by a third party. Suppose, for example, A owes B £100, and W owes £100 to A. If, on A's instructions, W pays B, then both A's debt and W's debt are settled by that one payment.

If now we suppose that A lives in London and B and W in Cape Town, the inconvenience of A sending gold to Cape Town at the same time that W is sending gold to London is avoided. In place of the two gold shipments, all that passes between London and Cape Town is a document, worded according to established form, signed by A directing W to pay B, instead of himself. Such a document, termed a Bill of Exchange, is illustrated below.

£100 0 0.

LONDON, 1st October, 19..



On demand, please pay to Mr. Barnaby Brace or order the sum of One Hundred Pounds, for value received.

ANTHONY ARNOLD.

TO MR. WALTER WINANS,
56 DURBAN AVENUE,
CAPE TOWN.

Bills of Exchange.—A bill of exchange (which term includes the cheque) is the commonest type of that most important but limited

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class of documents known to the law merchant as Negotiable Instruments. But for the evolution of this class of instrument, it is difficult to see how commerce could ever have reached its present huge dimensions. "A Negotiable Instrument is a document containing a contract, to the ownership of which document are attached all rights under the contract. Whoever is in *bona fide* possession of such a document is presumed to be the lawful owner of it, and therefore entitled to enforce all rights under the contract. The document, and with it all rights under it, is transferred either by mere delivery, or by delivery accompanied by indorsement, and the person who in good faith takes it, takes it free from any rights which might be enforced against the person from whom he takes it, and free from any defect in the title of such person" (Disney, *Elements of Commercial Law*, p. 126).

The bill previously illustrated, if it proved to be in order, would be presented to the drawee or addressee, Walter Winans of Cape Town, by the payee, Barnaby Brace, or his agent, to whom it would ordinarily be paid forthwith, since the instrument is what is known as a "demand bill", i.e., one which orders payment to be made on demand. Actually, as is shown in Chapter II, the bills used in foreign trade are more often "long bills", requiring payment to be made at the expiration of a stipulated period of time, but this variation does not affect the theory which we are now considering, viz., that by means of this simple instrument two debts between two countries are easily and conveniently settled: Winans, by paying Brace, settles not only his own debt to Arnold, but also Arnold's debt to Brace.

Bills of exchange, even when they are signed only by the drawers, provided they are persons known to be of good repute financially, but more so when accepted by the drawees (see Chapter II below), and, it may be, indorsed by one or more transferees, are always worth something approaching the values for which they are expressed, and as they have a ready sale in the market, they provide a most convenient means of settling international debts.

The Banks Act as Intermediaries.—The example already given might be carried a stage further; and it might be supposed that, while Arnold is owed £100 by Winans in Cape Town, he has no creditor in Cape Town to whom he owes money. Let us suppose, however, that there is a London merchant, Vernon, who owes £100 to a creditor in Cape Town. Clearly, then, if Arnold were to draw a bill on Winans in the form given above, and were to sell this bill to Vernon for £100, the latter could indorse it and forward it to his creditor, and all parties

would be satisfied. Each debtor would pay £100, and each creditor would receive £100.

But here the practical difficulty arises that it would be exceedingly troublesome for Arnold to hunt round London searching for someone who owed £100 to Cape Town, and it is even less likely that Arnold would himself have both a creditor *and* a debtor for the same amount in that centre.

The question then arises: How is creditor Arnold in this country going to establish contact with a debtor, also in this country, who wishes to pay a debt in Cape Town? The answer is that Arnold will make use of the services of one of the London banks, who make a business of buying and selling foreign bills. Let us assume for present purposes that he draws his bill in sterling on his debtor Winans and that he can "discount" the bill (i.e., sell it to his bank) at the prevailing rate. Thus, so far as he is concerned, the matter is at an end, except that, as a party to the bill, he remains liable for the amount until it is paid.

But it still remains for the banker to reimburse himself for what he paid for the bill; and it is easy to understand how he does this, if we bear in mind that he is in possession of a document which entitles him to payment of £100 on demand from the drawee Winans in Cape Town, or, should the bill be dishonoured, to £100 from Arnold in London. The banker will send the bill to his agent in Cape Town to be presented and collected from Winans, and against the proceeds he will himself sell drafts to English merchants who have money to pay in Cape Town. It will thus be seen that the operation resolves itself into the transaction outlined at the beginning of this section with the bank acting as an intermediary. Arnold sells his bill, not to Vernon, but to the London office of a South African bank: the bank sells to Vernon, not the bill drawn by Arnold, but a draft of equivalent amount drawn by itself. The reason for this procedure is that bankers and others, who deal in claims and rights to money in foreign centres, are better able to purchase bills and to dispose of the collected proceeds than any merchant, for the simple reason that debtors and creditors continually resort to them, either to buy the right to currency deliverable in a foreign centre, or to sell their claims to such currency.

The banks buy up trade bills payable in foreign centres which are offered to them by exporters and others who have drawn on their debtors abroad. The bills give the banks claims to money in foreign countries, and the instruments are sent by them to their agents in the

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relative foreign centres for collection and credit of the proceeds. The banks also buy up other rights to foreign currency, as, for example, other bankers' drafts, telegraphic transfers, circular notes presented by travellers for encashment, maturing coupons payable abroad and drawn bonds payable in other countries.

Thus, a London banker may send funds to his agents in Paris in the form of bonds or coupons of, say, French *Rentes*. These are collected or sold and the proceeds placed to his credit. In the same way, any standard securities of a foreign country may be forwarded for realisation and credit of the proceeds. Dividend warrants and coupons of the leading American railways are frequently remitted to America for the credit of London banks and finance houses, while large remittances of the bonds of Japanese loans are periodically despatched from London to the Far East, since, being Government securities, they are a convenient and secure means for the transfer of funds.

Moreover, some foreign coupons are payable in a number of different centres *at the option of the holder*, and the purchasing banker will naturally send them for collection or sale to the centre where they will realise the most, in terms of his own currency, sterling.

Against the credit balances so created, the banks sell drafts and other forms of remittance (or rights to foreign currency) to debtors in their own country who have payments to make in other countries. As a consequence, it is often more convenient for a London banker to have funds at his disposal, say, in New York than in London itself. A balance in the hands of his New York agent enables the London banker to sell rights to dollars in New York to his customers, whenever he is asked for them. But he could, of course, do this even without having an actual balance to his credit in New York, the matter being adjusted in the Account Current between him and his agent. As is the case with New York, so is it also with the other financial centres of the world.

It is clear then that British merchants have no difficulty either in selling or in buying rights to foreign currency. And what is true for traders in this country is true also for the foreign merchants, as banking facilities are available for all. Banks and financial houses specialising in this business, naturally for their own protection make themselves familiar with the financial standing of the drawers, acceptors, and indorsers of bills, and provided there is no ground for suspicion, readily take the bills offered to them. And, in the same way, they make it their business to be able to appraise instantly the value of any

other rights to foreign money which they may be offered for purchase.

As a result of the world-wide ramifications of British commerce, London banks are in a position to sell rights to currency in almost any place in the world against the proceeds of those they have bought. There is thus no necessity for an English merchant who has to pay money, say, in Monte Video to seek out another English merchant who has to receive money from Monte Video, in order to effect "an exchange" of his debt. The remitter may without difficulty and at any time have a bank draft specially drawn by his bankers to meet his particular requirements, or he may obtain from them any other form of remittance convenient for his purpose.

The banks do not, of course, perform these most valuable services for nothing. On the contrary, they make remunerative profits not only from the difference between the price at which they buy and the price at which they sell, but also from favourable movements in the rates of exchange and in the rates of interest earned on their funds in foreign centres.

Clearing Houses for International Settlements.—Thus we see that, as in the modern community the vast majority of internal debts arising for payment from day to day are settled by means of cheques and bills, so also, in much the same way, the vast sums of indebtedness continually arising between various countries are settled by means of credit instruments and credit transfers. And just as the practical wisdom of generations of bankers has evolved the Bankers' Clearing House, where the enormous mass of claims which each bank has to present daily to the others are all brought together and discharged by a process of set-off, so, in the larger sphere of international commerce, the financial centres of the different countries may be likened to clearing houses where the claims of one country against the others are similarly adjusted. With the minimum of trouble, labour and expense, international payments reaching stupendous figures are grouped into vast aggregates which are simply set off and cancelled, one against the other, by transfers in the books of the banks and other financial houses which undertake exchange business.

The most vital internal currency problems in any country are concerned with the means by which legal tender money is economised by the use of credit and credit instruments. In like manner, the problems of international exchange entail a study of the methods by which the use and transmission of gold are economised by the credit mechanism manipulated by the exchange banks. In both spheres of exchange, internal and external, the goldsmith, with his scales and

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his acids for testing, has been superseded by the banker and the exchange broker, who, though all their dealings are still conducted on the basis of payment in gold—at least in countries that have retained gold as their standard of value—now buy and sell, borrow and lend vast sums of money which exists merely in the form of credit instruments or of credit entries in a ledger.

Merchants are thus able to concentrate their attention on the purchase and sale of goods, and to leave to the bankers, brokers, discount and accepting houses much of the actual work of providing and managing the international currency used to discharge foreign obligations.

CHAPTER II

BILLS OF EXCHANGE

As the bill of exchange plays such an important part in the settlement of international debts, it is necessary to consider that instrument somewhat more fully.

Definition.—As defined by the *Bills of Exchange Act*, 1882, a bill of exchange is "an unconditional order in writing, addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand, or at a fixed or determinable future time, a sum certain in money to or to the order of a specified person or to bearer".

Every word in this definition must be complied with in order to constitute the document a valid bill of exchange. Thus a document which is not signed by the drawer, or in which the drawee or, if not payable to bearer, the payee, is not indicated with reasonable certainty, or which orders anything to be done except the payment of money, or which makes payment contingent upon the happening of an event which is not certain to happen, or which leaves the actual sum to be paid open to doubt, or which orders the money to be paid out of a particular fund, is not a valid bill of exchange. The reason for this, says Story in his work on Bills, is "that it would greatly perplex the commercial transactions of mankind, and diminish and narrow their credit and negotiability, if paper securities of this kind were issued out into the world encumbered with conditions, and if the persons to whom they were offered in negotiation were obliged to inquire when these uncertain events would be reduced to a certainty. And therefore the general rule is that a bill of exchange always implies a personal general credit not limited or applicable to particular circumstances and events which cannot be known to the holder in the general course of its negotiation".

A document satisfying the requirements as defined above, so as to constitute it a valid bill of exchange, conveys to a person

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who takes it in good faith and for value a legally enforceable claim against the person from whom he takes it (provided, of course, that the transferor has indorsed the bill; and a transferee would always insist on this) and against all other parties, i.e., signatories to the bill.

In practice bills of exchange, particularly foreign bills, are rarely exactly similar in form to the example already given on page 15. As a matter of fact, no precise form is legally necessary, though commercial practice has reduced the forms to certain well-defined classes. Bills are frequently drawn payable in currencies other than sterling; the time of payment varies; references are frequently made on the bill:—

- (a) To the particular account to be debited with the payment,
or
- (b) To the fact that the documents attached to it are to be surrendered only on the bill being either accepted or paid as the case may be, or
- (c) That the bill is to be paid either with interest, or at an indicated or determinable rate of exchange.

None of these additions varies the effect of the bill so as to make it a conditional document, since the *order to pay* remains unconditional.

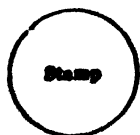
An **Inland Bill** is a bill both drawn and payable within the British Islands or one which is drawn within the British Islands upon some person resident therein. Any other bill is a *Foreign Bill* within the meaning of the Bills of Exchange Act, 1882; but this definition does not apply to the Stamp Act (see below).

The following, in addition to the simple form of a foreign bill already given, illustrate the usual commercial forms of bills of exchange.

1. Inland Bill.

2275 0 0.

LONDON, November 3, 19..



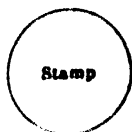
Two months after date, pay to John Jones or order,
two hundred and seventy-five pounds for value
received, and charge to account as advised.

THOMAS ROBINSON.

TO MR. ARNOLD JENKINS,
1, LONG ACRE, E.C.

2. Inland Bill.

No. 73.

£306 17 2.NEWCASTLE, *November 22, 19..*

Three days after sight, pay to myself or order, three hundred and six pounds, seventeen shillings and two pence, for value received.

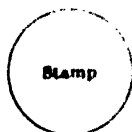
R. SMITH.

TO MESSRS. JONES AND HILL,
1, NEWRY ROAD, BELFAST.

3. Foreign Bill

COMMERCIAL.

No. 735.

Fcs. 7205.50.MANCHESTER, *May 10, 19..*

Fourteen days after date, pay this bill of exchange to our order, the sum of seven thousand two hundred and five francs, fifty centimes, value received, which place to account as per advice.

A. BUTLER.

TO MESSRS. ALBERT FRÈRES,
LYONS.

4. Foreign Bill.

COMMERCIAL LONG BILL DRAWN UNDER A CREDIT.

2970 0 0.NEW YORK, *January 17, 19..*

Sixty days after sight of this First of Exchange (Second and Third of the same tenor and date unpaid), pay to the order of the First National Bank, New York, nine hundred and seventy pounds sterling for value received, and charge same to the account of 100 bales of cotton per S.S. "Adriatic." L.C No. 15372.

ANTHONY TINS AND SON.

TO LLOYDS BANK, LTD.,
LONDON.

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5. Foreign Bill.

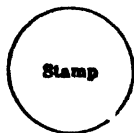
BANKERS' LONG BILL.

No. 619.

£300 10 0.

DEUTSCHLAND BANK, BERLIN,

January 17, 19..



Ninety days after sight of this our First of Exchange (Second and Third of same tenor and date being unpaid), pay to the order of Messrs. Jacobs and Company, the sum of three hundred and sixty pounds, ten shillings sterling, value received, which

place to account of this Bank as advised.

For and on behalf of Deutschland Bank,

To MESSRS. COUTTS AND Co.,
LONDON.

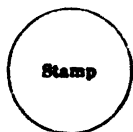
OSWALD SCHMIDT, Manager.

6. Bankers' Sight or Demand Draft.

The Guaranty Trust Company.

\$6,000.

LONDON, May 20, 19..



On demand, please pay to Messrs. Robins and Park or order the sum of six thousand dollars.

For and on behalf of the Guaranty Trust Company,

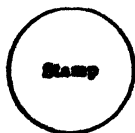
To the GUARANTY TRUST COMPANY, ABRAM LINCOLN, Manager.
NEW YORK, U.S.A.

7. Foreign Bill.

PAYABLE EXCHANGE AS PER INDORSEMENT.

£965 0 0.

LIVERPOOL, May 27, 19..



Ninety days after sight of this First of Exchange (Second and Third of same tenor and date unpaid), pay to myself or order the sum of nine hundred and sixty-five pounds for value received, exchange as per indorsement, and place to account as per advice.

ALBERT ROBERTS.

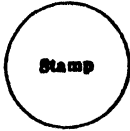
To MESSRS. MARK, BRUCE AND Co.,
RIO DE JANEIRO.

8. Foreign Bill.

DOCUMENTS AGAINST ACCEPTANCE WITH INTEREST CLAUSE.

Exchange for **£1,000.**

LONDON, June 30, 19..



Ninety days after sight, pay this First of Exchange (Second and Third of the same tenor and date unpaid) to the order of Lloyds Bank, Ltd., London, the sum of one thousand pounds sterling, payable at the National Bank of India's drawing rate for sight drafts on London on the date of payment, with interest at the rate of 6 (six) per cent. per annum from the date hereof to the approximate due date of the arrival of the remittance in London, value received. Documents to be surrendered against acceptance.

pp. A. MARKS, LTD.

TO MESSRS. ROYD AND RICHARDS,
CALCUTTA.

I. Brown,
Director.

In need with A. Richards and Co., for honour of drawers.

9. Foreign Bill.

DOCUMENTS TO BE SURRENDERED ON PAYMENT.

\$570.

NOTTINGHAM, October 22, 19..



Ninety days after sight of this our First of Exchange (Second and Third of same tenor and date unpaid), pay to our order five hundred and seventy dollars, value received, and place to account as advised. Shipping documents attached to be surrendered on payment.

A. ROBINSON AND CO.

TO ARKL BOYD, ESQ.,
SHANGHAI.

Parties to a Bill; Acceptance.—The person who draws and signs a bill is called the *drawer*, the person to whom it is addressed is the *drawee*, and the person to whom the bill is expressed to be payable is the *payee*.

The only persons liable on a bill are the parties thereto, but a

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person does not become a party until he affixes his signature to the instrument. When a bill is issued there is only one signature thereon, that of the drawer, and he is therefore the only person responsible for its due payment until it is signed by someone else. Very frequently, the drawer and the payee of a bill of exchange are the same person, i.e., the drawer draws the bill payable to his own order. If the drawee agrees to obey the order, i.e., to pay the bill, he signifies his consent to the order by writing his name across the face of the bill. This is called "accepting" the bill, and the bill, which before acceptance is frequently referred to as a "draft", is then called an "acceptance". Usually, the drawer adds the word "accepted" to his signature, but the signature is the vital thing. When the bill is drawn payable "after sight", it is necessary for the acceptor to add the date of presentation or "sighting", since it is from that date that its maturity is fixed. It is customary when accepting a bill to add the name and address of the banker who will pay it at maturity. This is called "domiciling" a bill. Thus the acceptance of a bill drawn payable at a specified period after sight would, in practice, run as follows:—

ACCEPTED JULY 15, 19...
PAYABLE AT LLOYDS BANK, LTD.
KING WILLIAM ST., E.C.
RUTTER, JONES, FOULKES AND CO.

The result of acceptance is that the drawee becomes a party to the bill primarily liable for its due payment, both to the drawer and to any other person who may subsequently take the bill, whether for value or not. The drawer is not, of course, liable on the bill to the acceptor, but, after acceptance, he remains liable to all other parties if the bill is not in due course paid by the acceptor.

Indorsement.—If the payee sells the bill, or, as we say, transfers it for value, he evidences the fact of the transfer by writing his name on the back of the bill. This is called "indorsing" the bill. Indorsement is necessary in all cases, except when the bill is drawn payable to bearer, or, having been drawn payable to order, has been indorsed in blank by the payee or indorsee, when the document passes by mere delivery. Similarly, any holder who transfers an order bill must indorse it. Should the bill be dishonoured, each indorser, i.e., transferor by indorsement, is liable for its full amount to all indorsers subsequent to himself, unless he expressly excludes himself from liability by adding after his signature the words *sans recours*, or

without recourse to me, or unless he indorses purely as agent, and the form of his indorsement clearly shows that he is indorsing as the agent for another, and not as a principal, in which case the principal is liable, and not the agent. The acceptor of a bill is the person primarily liable, then the drawer, then each indorser in the order in which he indorsed. Thus the final holder of a bill may very well have quite a number of different guarantees that the bill will be paid, as the security of the instrument increases with the number of signatures thereon. Indeed, so numerous sometimes are the indorsements that the back of the bill is insufficient to accommodate them, and a slip of paper, called an "allonge", has to be attached to the bill itself to provide additional space for them.

Usance.—A perusal of the specimens given above will show that the term of bills, i.e., the time within which they are payable, is variable. Bills may be drawn payable at sight, or on demand, or within a few days of sight or date, or at quite long intervals after sight or date. There is no general rule, legal or otherwise, for fixing these periods, but as between certain countries it has long been the usage to draw bills at a certain customary period after date or after sight. For example, cotton bills between New York and London are usually drawn at sixty days' sight, that being the long-established "usance" between the two centres.

Formerly, bills used to be drawn at one, two or more usances; but this practice can now be regarded as obsolete, though the "usance" between two centres may still be of some importance in determining the rights and liabilities of parties to a contract.

Nowadays, the term "usance" is used to denote the term of *any form of remittance*, and it is in this sense that it is used in some lists of exchange rates where a column headed "usance" specifies the form of remittance to which the exchange rate quoted refers.

Days of Grace.—In the British Isles, on all bills other than those drawn payable on demand, at sight, or which are overdue, three days of grace beyond the time of payment mentioned in the bill are allowed before a bill becomes legally due for payment. If the last day of grace falls on a Bank Holiday, then the bill is payable on the day after, but if the last day of grace falls on a Sunday, Christmas Day or Good Friday, the bill is payable on the preceding business day. If the last day of grace falls on a Sunday, and the second day of grace is a Bank Holiday, the bill is payable on the succeeding business day.

Days of grace are not allowed in most foreign countries.

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Calculating Date of Payment.—In calculating the due date of a bill, calendar months are reckoned and no allowance is made for lacking days. For example, a bill dated 31st January at one month is payable on the third day after the 28th February, i.e., on the 3rd March, whereas a similar bill dated 29th February in a leap year is payable on the 1st of April.

Of course, if a bill is drawn payable at so many *days* after date or sight, the requisite number of days must be carefully calculated by taking into account the varying number of days in the different months, due regard being paid to the fact that February has 29 days in each leap year as against 28 days only in an ordinary year. Thus, a bill dated 1st January, 1932, and made payable "90 days after date", would fall due for payment on the 3rd April, 1932, whereas a similar bill dated 1st January, 1933, would not fall due until the 4th April, 1933.

Stamp Duties.—Nearly all countries require stamp duty to be paid on bills of exchange drawn or negotiated within them. Foreign bills usually bear adhesive stamps, inland bills must generally be drawn on impressed stamp paper. The duties vary considerably in different countries, according to the nature of the bill and the time for which it is drawn. Bills on demand bear a small stamp, whereas those for long periods usually require *ad valorem* duties on the amount for which they are drawn.

Under British law, *foreign-drawn* bills must have adhesive stamps affixed by the person who first negotiates them in this country, but inland bills, with some exceptions noted hereunder, require to be drawn on paper impressed with the appropriate stamp. The duties are as follows:—

Bill of exchange payable on demand, or at sight, or on presentation, or within three days after date or sight for any amount (both inland and foreign drawn) ... 2d.

Note.—The stamp may be either impressed or adhesive.

Bill of exchange of any other kind and any promissory note (except a Bank note) for an amount

	not exceeding £10		2d.
Exceeding £10 but not	„ £25		3d.
„ £25	„ „ £50		6d.
„ £50	„ „ £75		9d.
„ £75	„ „ £100		1s.

Every additional £100 or fractional part thereof 1s

Note.—These stamps must be impressed on *all bills drawn in this country* other than those specified above, but for foreign-drawn bills the special adhesive stamps must be used. It must be understood that the definition of an inland bill in the Bills of Exchange Act, 1882, does not apply for stamping purposes. The Stamp Act lays down that bills drawn in the *United Kingdom* must bear impressed stamps although they may be foreign bills within the former Act, as, for example, a bill drawn in England on a person resident abroad and made payable abroad. For purposes of stamping, it should be noted, the Channel Islands and the Isle of Man are regarded as foreign places.

The duty payable on a bill of exchange drawn *and* expressed to be payable out of the United Kingdom, when actually paid or indorsed or in any manner negotiated in the United Kingdom, is as follows:—

Where the bill exceeds £50 but does not exceed £100...6d.

For every additional £100 or fractional part thereof ...6d.

For example, a bill drawn in Paris payable in Berlin is correctly stamped 6d. per cent. if negotiated in this country, but a bill drawn in Paris payable in London requires stamping in accordance with the schedule given above.

Note.—The stamp duty on bills over £100 according to the above table is at the rate of 1s. per £100, or 1s. per 2,000 shillings, i.e., the duty is $\frac{1}{4}$ *per mille*. This rate of stamp duty is often taken for working examples on the exchanges, as it is a fair average for most countries.

Various Kinds of Bills.—The specimens of bills given above indicate that many different types are met with in practice.

Cheques, “demand drafts” and “sight drafts” are terms used for bills which are payable on presentation to the drawee. Cheques are paid without acceptance.

Long Bills are those which are drawn payable at a certain specified period after date or sight. They are sometimes called *currency bills*, a term which is, however, ambiguous, since it may refer either (a) to a bill which has not yet reached maturity and is therefore current, or (b) to a bill which is drawn in foreign currency and not in sterling.

Likewise, the phrase “*currency of a bill*” may refer either to the period which the bill has still to run before its maturity, or to the monetary unit or units in terms of which the bill is expressed, though the former meaning is the most usual. When a bill is said to be

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drawn "*at a currency*", the meaning is that the bill is payable at so many days, weeks or months after date or sight. The expression *does not* refer to the monetary units in terms of which the bill is payable.

Short Bills are those which, whatever their original tenor, have only ten days or so to run before maturity.

Bank Bills include (a) bank drafts, which are drawn by bankers in one place on their branches, agents or correspondents in another, either at the request of their customers, or of the branches, agents or correspondents; and (b) ordinary commercial bills which are *accepted by* a reputable bank.

In the Market, bank bills are known as first-class bills, or "best paper", or "financial paper", because of the financial guarantee embodied in the signature thereon of a well-known bank, either as drawer, acceptor, or indorser.

Bills which bear the signature of a bank in the capacity of *indorser* (and not of drawer or acceptor) are not regarded as bank bills proper, though they are included with the latter in the general term "bank paper".

Trade Bills, or *Commercial Bills*, also described as "ordinary bills", "trade paper" or "commercial paper", are those arising from the usual course of mercantile dealing between merchants and manufacturers. Although these instruments are usually quite secure they fail to command as good a price in the Market as bank paper (i.e., they can be discounted only at *higher* rates of discount) because the credit of the parties is not considered to be as good as that of the banks and financial houses whose signatures appear on bank paper.

Bank Bills and Trade Bills can be either (a) *currency bills* or *tenor bills*, or (b) demand drafts or cheques. Long bills are more usual between distant centres.

Clean Bills and Documentary Bills.—*Documentary Bills* are those the payment of which is secured not only by the parties to the bills but also by merchandise. A documentary bill has attached to it the documents relating to the shipment in respect of which the bill is drawn. These documents are usually:—the Bill of Lading, Marine Insurance Policy, Invoice, and, sometimes, a Certificate of Origin of the goods, or a Consular Invoice. As a bill of lading is a document of title, *bona fide* possession of the bill of lading is tantamount to possession of the goods; so, if the documentary bill is dishonoured either by non-acceptance or by non-payment, the person in possession of the bill of lading can obtain the goods, sell them

and apply the proceeds against the amount of the dishonoured bill. Seeing also that the holder of such a bill has the security of the drawer and indorsers, he can call upon all or any of them to make good whatever deficiency may be disclosed between the amount of the bill plus expenses, and the proceeds of sale of the goods.

The documents are usually given up to the drawee when he accepts the bills, and in such cases the bill is marked "Documents against Acceptance", and is known as a "D/A Bill", or an "acceptance" bill. In other cases, where the credit of the drawee is not considered so good, the documents are not to be given up until payment is made, and the bills are marked "Documents against Payment", and are known as "D/P Bills" or simply "payment bills".

Frequently, the drawee of a D/P bill may wish to obtain possession of the goods *before* the bill of exchange is due for payment, but as he cannot claim the goods without the relative documents, he must make a special arrangement with the person holding the bill and documents so that he can obtain and handle the latter in order to obtain the goods. When the bill is in the hands of a bank, the drawer is usually asked to sign a document in favour of the accommodating bank called a Trust Receipt, by which he pledges himself to hold the goods in trust for the bank. Alternatively, he is allowed by mercantile custom to take up, i.e., pay the bill, at any time before it is due, under *rebate*, and so obtain the documents, the rebate allowance made by the banker being as a rule $\frac{1}{2}$ % above the rate for short deposits for the period the bill has to run.

Sometimes, too, bills are marked D/A/D or D/A/P. The former instruction (*Documents against Acceptance at collecting bank's Discretion*) enables the collecting banker to withhold the documents if any circumstances arise which render it advisable in the interests of the drawer that the documents should not be surrendered except against payment by the drawee. The documents would be withheld, for example, if the collecting banker had reason to suspect the solvency of the drawee; but if there were no such suspicious circumstances, they would be surrendered.

The D/A/P clause (*Documents against Acceptance provided all outstanding drafts are Paid*) is an instruction to the collecting bank to withhold the documents if other bills in course of collection, and having the same drawers and drawees, have been dishonoured.

Clean Bills have no documents attached, either because they do not relate to the sale of goods or because the credit of the drawee is considered sufficiently good to permit the documents to be sent

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to him direct (see Chap. XV). It will be appreciated that a D/A bill becomes a *clean* bill when it has been accepted, since the documents are removed from the bill and handed to the acceptor.

The majority of clean bills fall within the category of *finance* bills, i.e., bills drawn by banks on their foreign agents and branches, not against the actual shipment of goods, but for the purpose of transferring funds or satisfying the demand for exchange when trade bills are in short supply. (See *Accommodation Bills*, below.)

Dishonour of Bill.—If a bill is not accepted by the drawee when it is presented for acceptance, or paid by him when it is presented for payment, the bill is said to be dishonoured, and the presenting banker may have it "*noted*" by a notary public. The holder of a bill which is dishonoured must immediately give *notice of dishonour* to the drawer of the bill and any indorsers whom he intends to hold liable for payment, otherwise he will be unable to hold them liable for due payment. After having been noted, a foreign bill may be "*protested*", or the holder may have it protested immediately after dishonour, and so dispense altogether with the formality of noting. Usually, however, the bill is noted first, as this is a relatively simple and inexpensive procedure, and later, if it is decided to sue on the bill in a foreign country, the holder can have the noting "*extended*" into a formal protest as of date of the noting. A notary's protest is legal proof of dishonour in every country where the *lex mercatoria* prevails. The expenses of noting and protest can be recovered from any of the parties liable on the bill.

Case of Need.—On some bills, as in Example 8 (p. 25), an indication is made at the foot of the name of some person or persons who will pay the bill in case of dishonour for the account of a party to the bill, usually the drawer. The object of this is to obviate the considerable loss arising from the dishonour of the bill in a foreign country, and to preserve the honour and good name of the party for whom the case of need acts. Payment in such a case does not discharge the party at fault, who remains liable on the bill if his signature appears thereon, otherwise he remains liable on the commercial contract.

The insertion of a "*case of need*" is particularly useful in regard to documentary bills, the dishonour of which usually means that the drawee has refused to take delivery of the goods. In such circumstances the referee in case of need, who will usually be an agent or correspondent of the drawer, will be able to obtain possession of the goods and to realise them quickly at the best price obtainable, so reducing to a minimum the loss suffered by the drawer.

It must be observed, however, that the holder of a bill which includes a case of need is not *bound* to resort to the latter if the bill is dishonoured, though in practice he will usually do so in his own interests.

Accommodation Bills.—Where a bill does not arise from any actual commercial transaction, whereby one person becomes a *bona fide* debtor of another, but is created solely in order to enable one (or more) of the parties to it to put himself in funds by discounting the bill, it is known as an *Accommodation Bill*, and the person or persons lending their names for the purpose are called *Accommodation Parties*. The person primarily liable on such a bill is the person accommodated, be he drawer, acceptor or indorser of the bill.

Such bills are naturally frowned upon by bankers and they would not knowingly facilitate their use. This is not so much a question of commercial morality as of financial prudence, for accommodation bills are more likely to be dishonoured than are genuine trade bills, since the signatories usually resort to this device because their financial position is weak.

Not all accommodation bills, however, are of an undesirable character. There is one class of accommodation paper, in particular, which bankers handle largely and which serves a most useful purpose. In agricultural countries, for example, where the inhabitants live on the proceeds of sale of harvested crops, bankers are called upon early in the year to supply drafts to the merchants of such countries to pay for their imports of manufactured articles and machinery. These drafts are issued by the bankers against the future proceeds of bills which the merchants will draw later in the year when the harvest has been ingathered, sold and exported. Obviously, this kind of anticipatory drawing is capable of very wide and beneficial extension, and such bills, as well as *finance* bills proper (see page 32), stand in a very different category from accommodation bills properly so called, and derisively referred to as “kites”, or “windmills”.

Bills known as “*kites*” are similar to other accommodation bills in so far as they are drawn merely for the purpose of raising money, but they are derisively called “kites” because they are drawn by a firm or house (called a “kite flyer”) which, trading on its reputation, induces other parties to accept its bills for a consideration for the sole purpose of placing itself in funds. The process is known as “kite-flying”.

Market dealers find it difficult to detect such bills, as the opera-

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tions are often carried out by finance houses, sometimes even by banks, which have drifted into difficulties and choose this method of keeping their heads above water—for a time. A well-known instance was provided in the case of the Bank of Egypt which failed some years ago. This bank raised money over a long period by selling its drafts on London in return for cash in Egypt, and by providing cover for the drawings by drawing afresh. Gradually the Market dealers became suspicious, and, as soon as they showed hesitancy in taking more of the bank's paper, its activities came to a sudden end.

House Paper.—Bills drawn by one branch or office of a bank or mercantile firm on another branch of the same concern (i.e., so that drawer and drawee are identical) are known as "House Paper", or derisively as "Pig on Pork". Occasionally, the operations involving the issue of such bills are long undetected because one branch may be trading under a different name from the other and the bills may continue almost indefinitely to pass as "two-name paper".

Of course, if such bills have a backing in the export or import of merchandise and have attached to them the documents covering the shipments, they are perfectly good. But when, as sometimes happens, they have no documents attached, it is necessary to ensure that they do in fact represent an actual transaction, e.g., they may be drawn by the office overseas to obtain funds for moving produce from the interior to the coast. By reason of the difficulty of testing the genuineness of bills of this type, doubt is often thrown on their value, and the Market always becomes suspicious when such bills regularly come forward without documents.

Cross-firing.—Another practice sometimes resorted to by dabblers in accommodation bills is known as "cross-firing", a term given to the system under which two parties regularly draw bills on each other, i.e., regularly give accommodation each to the other, and so enable each other to raise funds for current operations. Like most transactions involving the issue of *pure* accommodation bills, this practice is, of course, thoroughly unsound.

Bills in a Set.—Bills on foreign places are usually drawn in a set of two or three parts, denominated First, Second and Third of Exchange, all of which are exactly similar except for the number and reference to the other parts, but only one part is accepted, and only one part is stamped, the three parts forming one bill. The object is to relieve the parties of the consequences of the loss of one part in the course of transmission, and also to facilitate negotia-

tion. The First of Exchange can be sent forward to the drawee for acceptance, the Second following by a later mail, while the Third part can be negotiated at once. When the three parts reach their destination, they are attached together, and are thereafter regarded as one bill. The drawee of a bill in a set should always take care to accept only one part (otherwise he will be liable on every part he accepts), and the holder should endeavour to get possession of all three.

Interest.—As a rule, interest does not enter into bill transactions arising from the purchase and sale of goods, but sometimes express provision is made for the payment of interest (*see* Example 8, p. 25). In that case, the amount of the bill to be paid by the drawee is increased by interest at a fixed rate for the period mentioned in the bill. A "sum certain in money" is no less a sum certain because it has to be paid with interest, or by stated instalments, or at an indicated rate of exchange.

If such a bill is offered to a banker for negotiation (i.e., sale) he will obviously be willing to pay more for it than he would for a bill similar in every other respect but bearing no interest clause. He will, in fact, give the seller credit for the interest that will be added to the bill. In due course the banker, through his agent, will collect from the drawee the face value of the instrument, *plus* interest at the prescribed rate for the period mentioned in or determinable from the bill.

CHAPTER III

THE BASIS ON WHICH CURRENCIES EXCHANGE

IN the first chapter it was explained briefly how the debts arising from international trade are settled through the intermediary of bankers who buy and sell rights to money payable in other countries. By way of illustration we took the case where an exporter, Arnold of London, drew a bill on his debtor in Cape Town, and we assumed, for the sake of simplicity, that the bill was drawn and payable in *sterling*.

Although many debts arising from the export of goods are nowadays payable in the buyer's currency, the vast majority of international debts are expressed to be payable *in terms of the currency or money of the creditor's own country*. An American who buys "old masters" in London generally undertakes to pay for them in sterling, while a London merchant who buys fashionable dresses in Paris has usually to provide payment for them in French francs.

Clearly, the American who has to pay money in London must buy the right to the requisite amount of sterling with his own currency—dollars—and, similarly, the London merchant who has to pay a debt in Paris must buy the right to the requisite number of francs in Paris. We already know *how* this is done—the debtors merely resort to the banks who make a business of buying and selling rights to money in all parts of the world. But what we do not know is the solution to the problem already postulated in the first chapter—*why* are so many francs at any particular time regarded as equal to the English pound sterling? On what basis do francs exchange for pounds, or pounds for dollars? Or, more generally, on what basis does one currency exchange for another currency? What governs the price of the money of one country in terms of the money of another?

The Rate of Exchange.—Many students of Foreign Exchange experience difficulty at this point because they fail to understand how it is possible to buy money with money, and how it is possible to have a "price" for money when money itself is used to express the prices

of all other articles. Such difficulties would be understandable if we were considering only one form of money, but in Foreign Exchange we are concerned with the buying and selling of *one form* of money in terms of *another form* of money. The best plan, therefore, is to regard all foreign currencies—whether they exist as coins or notes, or merely as *rights* to currency in the form of bills or credit balances in a bank's books—in exactly the same light as any other commodities which we buy and sell. Nowadays, it is as easy to enter a bank and buy so many thousand francs or dollars or pesetas as it is to enter a stock-broker's office and buy the same number of gramophone shares, or to enter a local grocer's shop and buy a number of candles or tablets of soap.

In Foreign Exchange, then, we are concerned with the buying and selling of one money or currency for another money or currency, and *the price of the unit of one currency in terms of another currency is called a Rate of Exchange.*

"Fixed" and "Movable", Pence and Currency Rates.—On the London Market there are two ways of expressing these prices or rates of exchange. The prices of some currencies are expressed in the same way as any other prices in this country, i.e., *in terms of pounds, shillings and pence per foreign unit of currency.* At the time of writing, the rate of exchange on India is about 1s. 6d. per rupee, while that on Hong-Kong is about 17d. per dollar. Rates of exchange quoted in this way are described as *pence rates*, or as "*fixed*" or "*certain*" or "*direct*" rates.

The majority of rates quoted in London, however, are expressed in reverse fashion, i.e., *in terms of foreign currency to the £1.* Thus, the price of French currency in terms of sterling, or the rate of exchange on France, is given in terms of francs and centimes per £1, e.g., £1 = 124·50 francs. The rates of exchange on U.S.A., Germany, Belgium and other important countries are similarly quoted, the rates being referred to as *currency rates*, or as "*movable*", "*uncertain*", "*indirect*" or "*variable*" rates (in contra-distinction to the pence quotations referred to above) because the price is expressed in terms of foreign currency.

For some inexplicable reason the latter method of quoting the rates of exchange gives students of Foreign Exchange no end of trouble, but a little consideration will at once show that there is really no difficulty about it at all. If we enter a shop and buy three novels for £1, we say that the price of each novel is 6s. 8d. But we could just as well regard ourselves as selling our £1 note for novels, and consider the selling

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price of our £1 as "three novels". In just the same way, we can buy or sell French francs in terms of so many pence per franc or in terms of so many francs per £1; and just as bananas are cheaper when they are "seven for sixpence" than when they are "five for sixpence", so are francs cheaper at 125 to the £ than at 124 to the £.

There are several reasons for the preference for the "currency rate" method of quotation in London. One reason is that the pound sterling is one of the world's largest monetary units, so that it is more convenient to quote in terms of the smaller units to the £1 than to quote in terms of a few pence to the foreign unit. But the more important reason is that the quotation of the price of foreign currency in this way facilitates comparison with the prices of sterling as quoted in the world's most important financial centres, having originated when the pound sterling was supreme in the world's markets, and British traders did not dream of quoting prices in foreign currency. Then there were comparatively few dealings in foreign exchange in London, and Continental quotations were used as the basis of all operations.

Merchants Buy at the Rate of Exchange.—We should now understand that the merchant who wishes to pay a debt abroad must pay his bank sufficient sterling to buy the right to the requisite amount of foreign currency at the prevailing rate of exchange.

Suppose that on a given day a London bank quotes the rate of exchange on Paris as 125·00 francs per £1, and that Brown of London wishes to pay 10,000 francs to Monsieur Noir of Paris for goods received.

Brown will pay the bank $\frac{10,000}{125}$, i.e., £80, and will be handed a sight

draft on the bank's Paris agent for 10,000 francs. This he will send to Monsieur Noir, and that gentleman will obtain payment in his own currency by presenting the draft for payment to the Paris agent of the London bank. In ordinary circumstances the London bank will have a balance in francs standing to its credit in the books of its Paris agent, and against this balance the amount of 10,000 francs will be debited in respect of the draft cashed for Monsieur Noir.

Market Conditions of Demand and Supply.—But the foregoing explanation does not indicate *why*, at any particular time, £1 *should be worth* 125·00 francs, or 4·86 dollars, or 35·00 belgas, and not more or less. Of course, if there is a much greater demand in London for francs to-morrow than there is to-day, then the banks may give their customers only 124·50 francs per £1 to-morrow although they may be willing to give 125·00 francs per £1 to-day. The price or rate of

exchange between any two such currencies will naturally vary somewhat according to the vagaries of supply and demand, in just the same way as the price of eggs on a country market varies according to the relationship between the quantities brought in for sale by the local farmers and the quantities demanded by the people who come to the market to buy.

From a more practical aspect, an excessive demand for francs in London means that London banks are being asked to *sell* more French francs than they are being offered or than they have available for sale. Finding their balances of francs in Paris becoming depleted, the banks endeavour to adjust matters by charging a higher price for francs, i.e., they offer to sell *less* francs per £1 and so lower the rate of exchange on Paris. Moreover, in order to keep up their French balances, the banks will bid for francs in the Market, i.e., they will offer to accept fewer francs per £1, and their actions in this direction also will tend to depress the rate.

If, on the other hand, there is an excessive supply of francs in London, i.e., if the London banks are being asked to *buy* considerably more francs than they are asked to sell, their balances in Paris will grow larger than is considered desirable, while their funds in London will to that extent be depleted. Hence, their unwillingness to make further purchases of francs will find expression in a reduction in the price they are willing to pay for them, i.e., in a *rise* in the rate of exchange, London on Paris, while this cheapening of francs will have the effect of encouraging *buyers* of francs to come forward, so tending to level up demand and supply.

The *supply* of any currency in London at any particular time will consist mainly of offerings of rights to that currency in a variety of forms by persons who have sent goods, securities or money to the foreign country. The *demand* for the foreign currency arises chiefly from persons in this country who have to buy rights to that currency in order to pay for goods, securities or money imported from the foreign country concerned. And, as we have seen, both the demand and the supply will be concentrated ultimately in the hands of the banks.

In addition to demand and supply springing from the actual transfer of commodities, foreign currencies will be in demand to pay for a variety of services rendered by other countries in connection with the transfer, insurance and financing of goods, while, conversely, offerings of foreign currency will be made by British shipowners, factors, commission agents, accepting houses and other agencies which undertake

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services connected with the transfer and finance of goods on foreign account.

The elements thus entering into the *aggregate* indebtedness between one country and other countries are more fully considered in Chapters X and XIII.

From the middle of the nineteenth century, when Goschen wrote his famous *Theory of the Foreign Exchanges*, until the period of the Great War it was almost generally agreed that the rates of exchange between any two countries were determined by the market conditions of supply and demand for remittances from one country to the other, and that those conditions depended mainly on the balance of trade indebtedness between the two countries.

It was left to Professor Gustav Cassel, of Stockholm, to emphasise the fact that the explanation afforded by this orthodox theory of the foreign exchanges does not go far enough. Whilst it explained the course of the exchanges in the normal circumstances of pre-war days, it offered no satisfactory explanation of the abnormal position and unparalleled fluctuations of the rates of exchange between independent currencies during and immediately after the Great War. Apart from the fact that the movements were of such frequency and of such extent that they could not be accounted for by the direction of trade even in normal circumstances, trade between many nations during the period of violently fluctuating exchange rates was practically at a standstill.

Some of the fluctuations were, of course, attributable to the action of speculators in foreign currencies, who, during and after the War, made enormous purchases or sales of foreign currencies according to their judgment whether the future value of those currencies was likely to rise or to fall. For, in addition to what we may term *legitimate* demand and supply, based on payments for goods, securities and services, there is always an important *speculative* demand and supply in the most important foreign currencies. Just as on the Stock Exchange we have "bulls" who buy certain shares they do not wish to hold in the expectation of a rise in price, and "bears" who sell certain shares which they do not possess in the hope that the price of these shares will fall still further, so also the foreign exchange market has its bulls and bears who buy and sell the various currencies in the hope of making profits from fluctuations in the rates of exchange.

The result of such conditions is that there are continual movements in the principal rates of exchange not only from day to day, but also from hour to hour. Sometimes the movements are very slight; at

other times they are violent in the extreme. But in all cases, the actual rate of exchange at which business is transacted is—as Whittaker so well remarks—“forged out between the hammer and the anvil of bid and offer”. At any particular moment, or on any particular day, dollars are worth in terms of pounds only *what the buyers on the market will give for them*, or, conversely, *what sellers are prepared to take for them*. If the market is flooded with dollars, or if speculators are selling dollars for all they are worth, then the price of dollars in terms of pounds will fall rapidly. On the other hand, if there are relatively few dollars on offer, and “bulls” of dollars are much in evidence on the market, then the price of dollars will rise and the rate of exchange on New York will express the prevailing tendency.

But even after giving due weight to the effects of the whims and fancies of speculators, the existing theory did not afford a true interpretation of the position at which the rates of exchange tended in the long run to rest, and, for this reason, Professor Cassel and others set themselves to find a fundamental theory of the foreign exchanges which would not merely explain the trend of exchange movements in terms of the balance of trade or of indebtedness, but would, as it were, get behind the old theory and explain *why the balance of indebtedness arising for settlement at any time should be what it is*. In other words, they sought to determine *why a foreign currency is in demand at all* and what, in the long run, determines the price that people, say, in this country, are willing to give for dollars or francs or pesetas.

True Value and Market Price.—The reader who has some acquaintance with Economics will know that the *market price* of a commodity, as determined by demand and supply at any particular time, may have very little, if any, relation to the *normal price* of the commodity as determined by its cost of production. Again, to-day's *price* of a gramophone share on the London Stock Exchange may have been forced up by promoters, underwriters and bull speculators out of all proportion to the *true value* of the share as an investment and interest-bearing security. In just the same way, the price of one currency in terms of another as indicated by the prevailing rate of exchange may be merely the result of market bargaining and afford no particular indication of the *real value* of one currency in terms of the other.

But however much the price of a commodity, of a share or of a currency may fluctuate from day to day, there is in the long run a true value to which the market price always tends to return. In the case of a commodity that true value is its cost of production, while in

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the case of a share it is its investment and income value. What, then, is the true or ultimate value of one currency in terms of another currency? The answer is that, in the long run, the worth of one currency, A, in terms of another currency, B, is judged by a comparison of the *purchasing power* of A with the *purchasing power* of B.

✓ **The Relative Purchasing Power of Two Currencies.**—Money, we have seen, is wanted merely because it gives its possessor the power to purchase the goods and services of others. Since each country uses its own particular form of money, that particular form must be obtained by anyone who wishes to purchase goods or services from the country concerned. ✓ In ordinary circumstances it would be useless for a Spanish trader to try to buy tinned meat in Chicago with pesetas, or for an American merchant to offer dollars in payment for silk purchased by him in Milan. In the absence of special arrangements, sellers of goods expect to be paid in their own money—that money which is provided for their use by the State, and which represents the only universal form of purchasing power within the boundaries of that State.

Now, at any particular time, people in London who are buying dollars or francs or marks may be willing to give for them whatever they are asked in the market—they will be prepared to buy at the prevailing rate of exchange. They buy dollars because that is the only way in which they can obtain purchasing power wherewith to pay their debts in the States; and, if the rate fails to reflect the true worth, there will be an adjustment in the demand for dollars which will bring about an adjustment in the rate quoted. *In the long run*, the price which will be paid for dollars is determined by the quantity of goods which dollars will buy as compared with the quantity of goods which pounds will buy; *in the long run*, buyers of dollars in this country will give for them *only what they are considered to be worth in terms of goods and services*.

✓ We judge the value of a foreign currency to us by its command over goods and services (i.e., its purchasing power) as compared with the command of our own money over similar goods and services. The greater the purchasing power of the foreign currency unit, the higher the price we are willing to pay for it. As we have seen, purchasing power is indicated by the general level of prices, so that if prices in a foreign country are high compared with our own, the money of that country will not go very far, and we therefore expect to get more of its money in exchange for our own money. ✓ If the franc or the peseta is not purchasing enough goods and services to satisfy our feeling of justice or equality at the moment, we will not pay a high price for it,

and the higher the level of prices in the foreign country relative to our own prices, the less will we pay for the money of that country. If we have purchased goods in France and have therefore to obtain francs to meet the debt, we may be *obliged* to pay the rate demanded by our bankers; but if we consider the rate too high, we shall be very careful in giving further orders for goods from Paris. And normally, of course, any purchaser of French goods will take into account the ruling level of the exchange *before* giving his orders for the goods.

Let us state the position in another way. A pound in my pocket here in this country will purchase so much—it has a certain purchasing power in terms of goods and services. I expect to get with it so many cigarettes, so many pounds of sugar and so many loaves of bread. If I wish to buy goods from France, I must first exchange my pound for French currency, but having done so I expect to get that amount of French currency which will enable me to buy just as many cigarettes, and just about as much sugar and bread, as I can get for each £1 in England. I am willing to pay more or less for the franc according as it gives me a greater or less command over goods and services in France. If I had visited France in 1913 and found that 25 francs went just about as far as a sovereign in England, then, of course, I should have been satisfied to exchange my Bank of England notes for francs in Paris at the rate of 25 per £1. But if I go to France to-day and find that it takes as many as 80 francs to go as far as the pound note does in this country, I shall naturally expect to exchange my £5 note for more than three times as many francs as I received in 1913.

Professor Cassel expresses these fundamental facts in this way: "Our willingness to pay a certain price for foreign money must ultimately and essentially be due to the fact that this money possesses a purchasing power as against commodities and services in that foreign country. On the other hand, if we offer so and so much of our own money, we are actually offering a purchasing power as against commodities and services in our own country. Our valuation of a foreign currency in terms of our own, therefore, mainly depends on the relative purchasing power of the two currencies in their respective countries." *

The Purchasing Power Parity.—We may thus conclude that the value of the unit of one currency in terms of another currency is determined, *at any particular time*, by the market conditions of demand and supply, but *in the long run* that value is determined by the relative

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values of the two currencies as indicated by their relative purchasing power over goods and services.)

In other words, the rate of exchange, in spite of temporary fluctuations due to the conditions of demand and supply on the foreign exchange market, will tend to rest at that point which expresses equality between the respective purchasing powers of the two currencies concerned. This point is called the *Purchasing Power Parity*.

Let us consider by way of illustration some representative group or block of commodities which are in demand both in the United States and in Great Britain. For the moment we will ignore transport costs and assume that these goods can pass freely from the one country to the other without impediment or restriction of any kind, and that, at a certain time, this representative group can be purchased in the States for \$500 and in this country for £100. What then should we expect? Clearly that people in the two countries would regard the purchasing power of \$500 as equivalent to the purchasing power of £100, and that, in exchanging dollars for pounds, they would expect to do so on this basis of the real relative worth of the two currencies. In other words, they would expect a rate of exchange of \$5 per £1, and if, in fact, they did not receive this rate, their actions would cause economic forces to come into play which would tend to bring the exchange rate to this point.

The truth of this can be easily verified. Suppose that, although \$500 buy the same block of commodities as £100, yet the market rate of exchange is only \$4 per £1. Then, so far as English purchasers of dollars are concerned, dollars are *overvalued* in the foreign exchange market, because, for each £1, buyers get only \$4, whereas, on the valuation of the dollar in terms of commodities, they should get \$5 per £1. On the other hand, so far as American purchasers of pounds are concerned, pounds are *undervalued* in the foreign exchange market, because buyers have to give only \$4 for each pound which represents purchasing power over commodities costing \$5 in the States.

Buyers of dollars in London would thus be dissatisfied with the market rate of exchange offered to them and they would refrain from entering into further transactions with America which would necessitate further purchases of dollars.

Sellers, on the contrary, would endeavour to take advantage of the relatively high price of dollars. Consequently, the London demand for dollars would fall off whereas the supply would increase, the price of dollars would fall and the rate of exchange would rise. In

New York, on the other hand, there would be eager buyers of sterling, but sellers would be disinclined to part with their holdings. The tendency would be for dollars to be exchanged into pounds so that the proceeds could be spent in the centre where money is the more valuable in terms of goods. Thus demand for sterling would tend to exceed supply and the price of sterling in terms of dollars would rise, i.e., the rate of exchange on London would move upwards from \$4 per £1, and would tend to rest at the purchasing power parity of \$5 per £1.

The adjustment would perhaps be slow, since many of the purchases and sales of foreign currency have to be made to liquidate existing contracts, and the buyers or sellers have to accept the current rates. But if the disequilibrium were sufficiently marked and showed a likelihood of remaining, the adjustment would come about through the actions of traders in the two countries.

In the illustration given, importers in this country would find that their imports from the United States were unprofitable and would either give up importing or drastically cut it down; whilst British exporters would hasten to expand their sales to the United States. Importers and exporters in the States would behave in exactly the opposite manner. As a result, there would be a reduction in the demand for dollars and an expansion in the supply, whilst sterling would be offered less and demanded more. These changes would cause the rate to move towards the purchasing power parity.

How the Purchasing Power Parity is Determined.—In spite of its theoretical truth, the great practical difficulty about the purchasing power parity is that it is largely an abstract conception. There is no *absolute* basis by which we can measure the relative real values of two currencies because these currencies themselves function in their respective countries as the basis of all values, and, as we have seen in discussing price index numbers, there is no *absolute means of assessing the purchasing power or internal value of a currency*.

When, however, different currencies are linked together by the gold standard, gold provides us with a basis for determining the relative values of commodities in different countries and also for comparing the values of two different currencies by reference to *their relative purchasing power in terms of gold*.

Gold, we have shown, is an international currency, accepted throughout the world in full discharge of debt and in full payment for commodities. Whether it consists of bars or ingots, or of coins of a denomination which is utterly unintelligible to the recipient, gold is taken anywhere and at any time, without cavil or comment. So

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that, when a country is on the gold standard, its money, because of its relationship to the common denominator, gold, is measurable in terms of any other gold currency, and it is so measurable in a way that is universally understood.

The Purchasing Power Parity under a Free Gold Standard.—

For many years prior to the outbreak of the Great War in 1914 the currencies of the principal countries of the world were based on what is known as the *full gold standard* or *gold specie standard*. This implied that the moneys of each of such countries were freely exchangeable for gold, in bullion or in coin, at practically the same rates as those at which the standard coins were minted, that all debts payable in the countries concerned were, if required, payable in gold upon demand, and that gold coins were in circulation. In other words, a French creditor who was owed £100 in London could obtain in payment either 100 gold sovereigns or gold bullion containing the same weight of pure gold as is contained in 100 sovereigns. Moreover, these sovereigns, or the bullion if it were preferred, could be taken to the Bank of France and gold francs containing an approximately equal weight of pure gold could be had in exchange.

In these circumstances, gold flowed freely from one country to another. The prices of goods in the principal countries were gold prices. If, for any reason, gold became relatively scarce in one of these countries, its commodity prices would fall. Other nations would therefore buy its goods and gold would tend to be sent to that country in payment, thus increasing its supplies of gold and restoring its level of prices. The quantity of gold in existence thus tended to be distributed among the nations according to their relative requirements, and prices throughout the world tended to reach equilibrium at the point where a given quantity of gold bought approximately the same quantity of goods in one country as it did in another. In other words, both money (i.e., gold) and goods tended to have the same value in all places.)

Conditions are much the same between nations which, in place of the full gold standard, have adopted one of its two modified forms, known respectively as the *gold bullion standard* and the *gold exchange standard*. The essential feature of *any type* of gold standard is that the value of the monetary unit is kept equal to the value of a defined weight of pure gold. Under the gold specie standard this is done by including the defined weight of gold in the standard coin and by placing no restrictions on the exchange of bullion for coin, or *vice versa*, or on the export or import of either bullion or gold coin.

Under the *gold bullion standard* (such as was operative in this country from 1925 to 1931), gold coins are replaced by notes issued by the Government or central bank, and the note-issuing authority is obliged to buy and sell *gold bullion* at fixed rates. Thus in Great Britain, under the Gold Standard Act, 1925, the Bank of England was obliged to buy all gold offered to it at £3 17s. 9d. per oz. standard * (equivalent to $84\frac{13}{16}$ d. per oz. fine). It was also obliged to sell standard gold (i.e., gold eleven-twelfths fine) at the rate of £3 17s. 10½d. per oz. (equivalent to $84\frac{1}{11}$ d. per oz. fine), provided the amount demanded was not less than 400 ounces troy of fine gold (about £1,700). By these arrangements, a fixed relation was established between the value of legal tender money (i.e., Bank of England notes) and the value of gold, and, while gold was made available for *export*, it was withdrawn from internal circulation.

Under the *gold exchange standard*, the currency consists of notes (or silver token coins), and the note-issuing authority is obliged to convert those notes (or the silver coins), not into gold bullion, but into *foreign exchange* at fixed rates on a country which itself is on a gold specie or gold bullion standard. Sometimes the authority is given the *option* of converting into gold or gold exchange. By these arrangements, currencies established on the gold exchange standard are *indirectly* linked to gold, and can be indirectly exchanged for gold bullion (see also Chapter XVIII).

In practice, therefore, the maintenance of a gold standard of one of these three types necessitates the maintenance of the *convertibility* of the circulating legal tender currency into gold or its equivalent.

Convertible Paper.—The convertible note has many advantages as currency. It is both convenient and economical, and, so long as it is issued in suitable denominations, and is always convertible into gold or its equivalent on demand, it fulfils the same functions as a metallic currency. The great virtue of a convertible currency is that its volume is automatically limited by the available reserves of gold or gold exchange, and the danger of over-issue is thereby avoided.

It is imperative, of course, that adequate reserves should be maintained so that all demands for conversion of the notes can at once be met. It is found, however, that only a very small proportion of a convertible note issue is actually presented for encashment,

* This price was originally known as the *Mint Price of Gold*, as it was the equivalent which the Mint would pay for every ounce of standard gold offered to it for minting into coins. The equivalent was based on the legally defined gold content of the sovereign, namely, 113·0016 grains of fine gold.

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and, so long as confidence in the issue is maintained, the notes continue to circulate without a thought for the reserves which lie behind them, with the result that their use effects a considerable economy in the use of gold, and larger supplies of that metal are consequently available for export and other purposes.

When, by the adoption of one of these forms of gold standard, the currency of a country is established on the gold basis, any person in that country who wishes to compare the value of his own currency with that of another country on a gold standard will naturally think first and foremost of their relative values in terms of gold. If, therefore, Britain and the United States are both on the gold standard and \$5·00 purchase as much pure gold as £1, then an American who has to buy sterling will be satisfied to accept a rate of exchange of \$5·00 = £1, or, alternatively, he will be satisfied to sell goods which he values at \$5·00 in return for the right to £1 payable in London, i.e., the right, if he likes to enforce it, to one pound's worth of gold in London. On the other hand, an Englishman buying goods from New York will, in the same circumstances, be satisfied to pay his bank £1 for each amount of \$5·00 paid out on his account by the bank's agent in New York against the purchase of the goods.

If two countries maintain the gold specie standard, the gold coins of one will be clearly interchangeable for those of the other merely by weight—due allowance being made, of course, for any difference in the purity of the gold contained in the coins, and, *under any type of gold standard*, whether gold coins are minted or not, the purchasing power of the standard currency unit will be approximately the same as the purchasing power of its gold equivalent. Moreover, the basis of the rate at which one gold standard currency will exchange for another can be determined by finding the ratio between the legal fixed gold equivalents of the two standard monetary units. This basis is called the *Mint Par of Exchange*.

Mint Par of Exchange.—As between two countries on the *full* gold standard, the Mint Par of Exchange is defined as:—

“The exact equivalent of the standard coin of one country, expressed in terms of the standard coinage of another country having the same metallic standard, the equivalent being determined by a comparison of the quantity and fineness of the metal contained in the two standard coins as fixed by law.”

By English law our standard coin, the sovereign, contains a definite weight of gold of a definite fineness. By French monetary law a

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hundred-franc gold piece also contains a definite weight of gold of fixed fineness. If then we know these laws, or Mint regulations as they are called, it is an easy matter to determine the exact ratio which the pure gold in a sovereign bears to the pure gold in a hundred-franc gold piece. Similarly, we can determine the exact ratio which the pure gold in a sovereign bears to the pure gold in the standard gold coin of any other gold standard country.

Clearly, the foregoing definition of a Mint Par of Exchange will not apply if one or both of the countries concerned has not minted or legally provided for a standard gold coin, i.e., if one or both of the countries has adopted the gold bullion standard or the gold exchange standard, and, instead of providing for the mintage of a standard coin, has declared by law that its unit of account shall be regarded as equivalent to a specified weight of pure gold. Where such conditions apply, we can say that:—

The Mint Par of Exchange expresses the ratio between the statutory bullion equivalents of the standard monetary units of two countries on the same metallic standard.*

Examples of the manner of calculating the Mint Pars of Exchange are given in a later chapter. Before Britain's departure from gold in 1931, the following were the principal Mint Pars between the English gold sovereign and some of the leading monetary units:—

*United States	£1 = \$4·8665
Germany	„ = Rmks. 20·429
Belgium	„ = Belgas 35·00
France	„ = Fcs. 124·2134
Italy	„ = Lire 92·46
Switzerland	„ = Fcs. 25·2215
*Spain	„ = Pesetas „
*Denmark	„ = Kroner 18·15952
*Norway	„ = „ „
*Sweden	„ = Kronor „
The Netherlands	„ = Florins 12·107

(It is clear from the definition that a Mint Par of Exchange can be established only between two countries having the same metallic standard. You cannot have a Mint Par between one country with a gold standard and another with a silver standard, though you may

* At the time of writing (February, 1934) the gold standard has been suspended in these countries.

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have a Mint Par of Exchange between two countries whose standard is silver.) No ratio can be definitely fixed between silver and gold, because the market price of one metal in terms of the other is a variable and not a fixed price. In gold standard countries, silver is simply a commodity subject to fluctuations of supply and demand, just as the base metals are; and similarly the price of gold in silver standard countries is a fluctuating, not a fixed price. The Chinese silver dollar is worth in London only what it will fetch as silver, and in China the value of our gold sovereign depends upon the number of silver dollars which will be given for it by banks and bullion dealers in that country.

The Mint Par of Exchange between any two gold standard coins is simply the *theoretical* measurement of one standard gold coin in terms of the other. To say the sovereign is equal to 124·21 gold francs is just like saying that 1 kilometre is equal to 0·6214 of a mile, or that 1 kilogram equals 2·204622 lb. But the mint par has nothing to do with any actual sovereign, or any particular 124·21 gold francs. It assumes that the two coins concerned are of the full legal weight and of the absolute standard of fineness required by the mint regulations. For these reasons the mint par is unaffected by the fact that coins may suffer abrasion through being circulated, or that there might be a slight difference (permitted as *tolerance* by the Mint Laws) between the actual weight of the coins minted and their legal weight, or a slight difference (permitted as *remedy allowance* by the Mint Laws) between the actual purity of the coins and the standard of purity required by law, or that there is a margin between the central bank's buying and selling prices for gold bullion or gold exchange.

Any such differences must, of course, be taken into account if it is sought to exchange one gold currency for another, but this does not affect the theoretical mint parity between these two currencies. That parity is a creation of law, and so long as the monetary laws of the countries remain unaltered, the Mint Par of Exchange between them will remain unaltered.

✓ (Gold Points or Specie Points.—So long as gold can flow freely between two gold standard countries, then the rate of exchange between them must tend to keep very closely to the mint par. If both currencies are freely convertible into gold, their purchasing power is really the purchasing power of gold and the purchasing power parity between them should coincide with the mint parity. In practice, the market rate of exchange will not remain exactly at the mint par. It will move on either side of that ratio within two limits, known

as the *gold points* or *specie points*, which are determined by the cost of moving gold between the two countries concerned.

The theory of the gold points can be explained and understood only if we consider the case of two countries which are both on the gold standard, and for obvious reasons it is desirable that one of those countries should be our own country, Britain. At the time of writing (January, 1934), Britain unfortunately remains off the gold basis in consequence of the conditions which led to the crisis of 1931 (see Chapter XX), but for purposes of the following explanation it is nevertheless assumed that the gold standard is still in operation in this country and that the sovereign containing 113·0016 grains of pure gold is still the standard coin.

We have seen that £1 in gold is the exact equivalent of Fcs. 124·21 in gold, so that, in theory, a standard sovereign would be exchanged in Paris for 124·21 standard gold francs, and 124·21 standard gold francs would be exchanged in London for a standard sovereign. But to move a sovereign between London and Paris entails expense and involves a certain loss of interest, and due allowance must be made for these and various other factors, discussed in Chapter IV, in calculating the yield resulting from buying gold in one centre and selling it in the other.

For purposes of illustration, we will assume that the cost of transmitting gold between London and Paris on a given date is approximately 50 centimes per £1, and that gold can be bought and sold in both countries at mint par rates, i.e., that legal tender notes in the two countries are freely convertible into gold at the legal rates.

Then, for every sovereign's worth of gold sent to Paris, a London remitter would realise—

Fcs. 124·21 minus expenses ·50 = Fcs. 123·71 net,

and, on the day in question, this would be the *outgoing* or *export* gold, specie or bullion point from London to Paris.

On the other hand, to pay a gold sovereign (or its equivalent) in London it would cost a Paris remitter—

Fcs. 124·21 plus expenses ·50 = Fcs. 124·71,

and this, on the day in question, would be the *incoming* or *import* gold, specie or bullion point into London from Paris.

✓**Limits to the Prices of Remittances.**—Clearly, there are two gold points between this country and each country whose monetary standard is gold, one at which it is cheaper to ship gold to pay foreign

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creditors rather than buy and use any other form of remittance, and the other at which it is cheaper for foreign debtors to remit gold rather than use any other form of remittance.)

Debts will always be paid in the cheapest possible way, and people in one country will not pay more on the foreign exchange market for the currency of a foreign country (i.e., for purchasing power in that country) than they can realise by buying gold and paying the expenses of transmitting it to the foreign country, thereby obtaining gold purchasing power in that country. If at any particular time the gold points with France are those which we have quoted, then so long as the rate with France is over 123·71 per £1, it will pay an English debtor to buy francs in the market rather than send gold, for he thereby obtains more than 123·71 francs in France for every £1 he pays in London. Once the rate drops below this figure, it will pay better to send gold rather than buy francs on the market; and this point, obtained by deducting from the currency equivalent of the sovereign (i.e., the Mint Par) the actual cost in the foreign currency of obtaining and remitting each sovereign, is known as the *Export Point from England*.

The Import Point to England is the Mint Par (= Fcs. 124·21) plus the actual cost of obtaining and remitting gold per unit of Fcs. 124·21. This cost we have assumed to be .50 franc; hence, on this basis, the import point to England is Fcs. 124·71, and this point is reached when a French debtor is asked to give more for sterling remittances than Fcs. 124·71 per £1, notwithstanding that he can send gold and realise that rate.

We may express the same conclusion in alternative fashion by stating that the export specie point from a country is *the rate of exchange obtained by purchasing gold at home and selling it abroad*, while the import specie point to a country is *the rate of exchange obtained by purchasing gold abroad and selling it at home*.

If we are dealing with foreign currencies which are quoted in London as "currency rates" (e.g., so many francs per £1), we can say that if the rate in London rises *above* import gold point there will be a tendency for gold to flow to this country from the foreign centre, whilst if the rate falls *below* export gold point gold will tend to flow from London to the foreign centre.

Where the foreign currency is quoted as a "pence rate", gold will tend to move when the rate falls *below* import point or rises *above* export point.

↓ **The Automatic Check of Gold Movements.**—Now the fundamental

importance of the gold points is not so much that they act as limits to the prices of remittances between two gold standard countries, but that they afford a definite indication that gold movements (or other alternative measures) are necessary to adjust the relative price levels of the two countries. If the currencies of any two countries are maintained on the gold standard, then the price levels in both countries will represent the purchasing power of gold in terms of commodities and services. And so long as gold can pass freely between the two countries, its purchasing power in both will be approximately the same, and the purchasing power parity between the two currencies tends always to coincide with the mint parity.

If prices in one gold standard country—Country A—are relatively high as compared with those of other gold standard countries, the imports of Country A will increase and its exports will fall off. There will be, as a result, a reduced demand for A's currency, and at the same time, an increased supply of its currency, on the exchange markets. This will bring about a depreciation in the exchange value of A's currency relative to other gold standard currencies, and eventually A's rates of exchange on other gold standard countries will reach export specie point. Gold will then flow from Country A, the volume of its currency and credit will contract, and the level of its prices will fall. This process will continue until prices in Country A are once more in equilibrium with world prices.

But the adjustment of the *exchange* position through this process would be very slow, even though it were accelerated by the credit policy of the banks. A more immediate adjustment is provided by the action of bankers responsible for the movement of gold from Country A to Country B. If the movement is undertaken by a banker in A, he will sell the gold in Country B, and so obtain possession of more of the currency of that country; whilst, if the movement is arranged by a banker in Country B, he will have to purchase the gold in A in exchange for some of A's currency, which he will give up. Hence the supply of B's currency in Country A will be increased, or the supply of A's currency in Country B will be reduced, bringing about an immediate adjustment of the exchange rate. Meanwhile the adjustment of price levels will be proceeding slowly but surely, through the contraction of the basis of credit in Country A. This adjustment will be explained more fully in a later chapter.

Hence, between two countries on a gold standard, forces are constantly at work which tend to bring about an equality in their respective price levels, i.e., an equality in the value of gold in both countries,

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and also to keep the exchange rate between those countries within the gold points. Those forces may have practical effect in a number of ways, but ultimately gold will move when the exchange rates reach the specie points, those limits which indicate that the time has arrived when gold must be moved if the price levels are to be adjusted.

Gold Shipments Result from Actions of Bankers.—In practice, of course, the merchants and traders who have to make payments to other countries do not worry about purchasing power parities, or about the value of currencies in terms of gold. While, in theory, there is nothing to prevent any merchant or trader from sending gold in payment of a debt if he cannot buy a credit remittance at a sufficiently cheap rate, in practice shipments of bullion are undertaken only by bankers and bullion brokers, who make a special business of this class of transaction, and who have at their command not only appliances of particular kind but also protective measures of special character, all of which enable them to carry out such transactions at the lowest possible cost and at the minimum of risk.

Nevertheless, the economic forces underlying the purchasing power parity theory operate unfailingly through the actions of bankers and others in the various financial centres. A banker who is anxious to maintain his franc balance in Paris will not accept less francs per £1 for his customers' bills on France, or for remittances offered to him by the Foreign Exchange Market, than he can realise by shipping to France gold obtained from the Bank of England or from the London Bullion Market. He maintains his franc balance in order to supply his customers with purchasing power in France, and if he cannot buy that purchasing power in the form of rights to French currency at a cheaper rate than he can buy and ship gold, then, of course, he will ship gold at the earliest possible opportunity. On the other hand, the French banker who seeks to maintain his sterling balances in London will not pay more francs per £1 for his customers' bills or for any other form of remittance to London than he can realise by exporting gold and paying the expenses of transmission.

For these reasons, bankers and others who make a business of shipping gold carefully watch the exchange rates and arrange for gold to be sent in or out of a country when it becomes profitable to move it. The institution which exports the metal will receive credit in the currency of the country to which the gold is consigned, and must therefore make due allowance for all the expenses and charges involved, when calculating the rate of exchange at which it can profitably carry out the shipment.

Suppose, for example, that the London rate of exchange on New York for telegraphic transfers is approaching the point at which a London banker, with his intimate knowledge of all the expenses involved, knows it is profitable to ship gold to the United States. He maintains a careful watch on the course of the exchange market and as soon as he sees his opportunity he arranges for a consignment of gold to be sent and sells dollar remittances against the anticipated proceeds.

Bankers in New York are similarly watchful, and when such a movement is warranted by the exchange position, they remit sterling to London and instruct their London agents by cable to buy a specified quantity of gold on the London Market and to ship it at once to New York. The New York banker is debited by his London agent with the cost of the gold and with all expenses attending the shipment, including freight, insurance, packing, cartage, etc. This debit will in due course be met by the proceeds of sterling remittances sent by the New York banker. When the gold is realised in New York the banker in that centre recoups himself for the sterling remittances he has forwarded to London and any balance remaining represents his profit or loss on the transaction.

We may say, therefore, that *between any two free gold markets, gold shipments will be made as an exchange operation whenever the yield or out-turn from the purchase of gold in one centre and its sale in another yields a profit over the current rate of exchange between the two centres.*

Influences which Affect the Range of Gold Exchange Fluctuations.

—Since the export and import specie points represent the limits within which gold exchanges fluctuate in ordinary circumstances, it will be clear that, the closer those limits are to the mint parity, the smaller will be the range within which the exchanges can fluctuate. Consequently, any factor which has the effect of reducing the cost of moving gold between two countries must also have the effect, other things being equal, of lessening the gap between the upper and lower gold points and thus restricting the range of exchange movements. More speedy means of transport, the use of air transport between Continental centres, the lowering of interest rates, and the cutting of insurance and freight charges consequent upon competition for the business, are all examples of factors which have the effect here discussed.

On the other hand, even those countries which purport to maintain the gold standard often place restrictions on either the export or the import of the metal. The effect of such restrictions is that the export and import specie points no longer act as limits to the movements of the

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rates of exchange, and, unless other devices are adopted to control the exchanges, it is likely that the country imposing the restrictions will be forced to acknowledge its abandonment of the gold standard.

The Purchasing Power Parity when a Currency is Inconvertible.—

When a country leaves the gold standard, the effect is that its currency is no longer tied to gold, and fluctuations in the value of that currency in terms of other gold currencies are no longer subject to the checks of automatic gold movements. When the exchanges move against the country and its currency falls in value, gold does not automatically flow outwards in order to rectify the position, although there will ordinarily be nothing to prevent gold from flowing *into* the country if conditions should be so unusual that the exchange value of the currency is for any reason *above* its mint par value.

Actually, restrictions on the outward movement of gold need not necessarily cause the exchange to fall away from the mint par, because the central bank or the Government may take steps to control the exchanges (as by the institution of an Exchange Equalisation Account or by the imposition of restrictions on exchange operations) with a view to keeping them in much the same position as if gold were free to move either into or out of the country.

In general, however, the effect of the abandonment of the gold standard is to cause the exchanges of the country concerned to move markedly away from the previously existing mint parities, for, even if trade conditions do not justify such a movement, the failure of confidence in a currency which generally follows its departure from gold immediately causes adverse movements in the exchange rates. This is due mainly to the operations of speculators who sell the inconvertible currency *in anticipation of* a fall in its value. The movement is accentuated by the actions of private investors who hasten to move their funds from the country concerned.

The failure of confidence in the stability of a currency which has become inconvertible is due mainly to the fact that, in the past, inconvertibility has almost always been followed by inflation, i.e., the deliberate and conscious issue of currency to excess. When this happens, prices rise in just the same way as they would if an excess of gold coins were put into circulation, but, in the case of inconvertible notes, there is no automatic adjustment. The paper cannot be sent abroad, as foreign creditors will not accept it in payment, but instead, the value of the money as measured in goods and services tends still further to depreciate; trade is disturbed, and, as the country becomes a good market in which to sell, imports are encouraged and

exports are discouraged, i.e., there is a premium on imports and a correlative drag on exports. If this continues, the exchanges pass the outgoing specie point, and gold, not being available, cannot be sent as a corrective. In such circumstances, the exchanges fall until they reflect the depreciation of the currency; the premium on imports gradually disappears, and the exchange will remain at the lower level in terms of sounder currencies until economic forces bring about a change, or steps to that end are taken by the monetary authority.

Now the questions arise: How is the exchange between an inconvertible currency and a gold standard currency determined at any particular time? [And in what way is the exchange between any two inconvertible currencies determined?] As an inconvertible currency is divorced from gold, its exchange value cannot be determined by reference to the quantity of gold for which it is legally exchangeable or to which it is legally equivalent. [At any particular time, therefore, the value of an inconvertible currency on the exchange market is what it will fetch in terms of other currencies; but, ultimately, that exchange value will tend to be determined by the purchasing power of the currency in terms of goods and services, and the exchange rates between that currency and other currencies will tend to rest at the purchasing power parities between the currencies] ** see p. 10*

Here we are faced with the difficulty that the purchasing power parity between any two currencies is based on factors which are continually changing, but we can calculate it roughly at any particular time by taking the theoretical mint par of exchange between the two currencies as our starting point, and by using price index numbers to measure the changes which have taken place in the internal purchasing powers of the currencies since they ceased to function on the gold standard.

Suppose that under a common gold standard, the currency of country A exchanges for that of country B at the rate of \$5 = £1, and that both countries resort to a long period of inflation until ultimately A's currency is inflated twofold, while B's is inflated fourfold, i.e., the value of A's currency is lowered to one-half of its former value, i.e., by 50 %, while the value of B's is lowered to one-quarter of its former value, i.e., by 75 %. The degrees of inflation in the two countries are therefore in the proportion of 1 : 2, and the new purchasing power parity will thus be one-half of what it was before, i.e., \$2.5 = £1.

Again, take the case of two countries, A and B, both of which were on the full gold standard in 1920, and let us assume that the

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index numbers of wholesale prices in both countries stood in that year at 100. Let us assume, further, that the mint parity between their two currencies is $1x = 5y$ and that this reflected the purchasing power parity between the two currencies in 1929. Suppose that by January, 1934, A had maintained the full gold standard and that her index number had moved slightly to 120, whereas B had inflated her currency and that her wholesale price index had risen to 300. Then we may estimate the purchasing power parity in January, 1934, as follows:—

Mint Parity in 1929 is $1x = 5y$

$$1x \text{ in 1929} = \frac{120}{100} \text{ of } 1x \text{ in 1934}$$

$$5y \text{ in 1929} = \frac{300}{100} \text{ of } 5y \text{ in 1934}$$

$$\therefore \text{ in 1934, } \frac{120}{100}x = \frac{300}{100} \times 5y$$

$$\text{i.e., in 1934, } 1x = \frac{300}{120} \times 5 = 12.5y$$

This would be the approximate purchasing power parity between the two currencies in January, 1934, and the market rate of exchange would tend to fluctuate around this parity. The new parity indicates that B's currency as between 1929 and 1934 depreciated 150 % in relation to A's currency. If the inflation of B's currency had been greater, her index number would have been higher and the purchasing power parity would also have been higher.

Although the theory here illustrated has been borne out in actual practice, there are for a variety of reasons considerable variations between the prevailing rates of exchange and the purchasing power parities as obtained by calculation.

✓ **Deviations from the Purchasing Power Parities.**—Variations between actual exchange rates and calculated purchasing power parities are known as "*deviations from the purchasing power parities*". They may be accounted for by a number of factors. In the first place, we may refer to the admitted inaccuracy of price index numbers, and to the fact that they are calculated in different countries on entirely different bases. Furthermore, index numbers of *internal* prices are representative of all prices within the country, including the prices of many commodities and services which do not enter into international trade and which do not give rise to foreign exchange

operations. And even if it were possible to calculate an index number of the prices of commodities exchanged externally, allowance would have to be made, as it must be made in the case of gold, not only for the cost of moving the commodities from one country to another, but also for any export or import duties which have the effect of increasing the cost of the commodities to the importing country.

Moreover, since the purchasing power parity theory is a theory that looks primarily at the manner in which the demand for and the supply of foreign exchange is influenced by the movement of *goods*, it fails to take into account many influences which have no connection at all with the movement of goods. It is true that the state of trade between two countries will influence their mutual indebtedness in respect of items such as freights, insurance and the like; but it will not *directly* affect items such as the movement of bankers' funds for investment purposes, public investment in stocks and shares, transfers in respect of inter-governmental indebtedness, speculative purchases and sales, and similar factors. Yet all these influences cause exchange fluctuations as much as do payments in respect of goods.

It must also be remembered that the purchasing power parity theory is no more than an expression of a *long-term* tendency which assumes the free interplay of economic forces. In recent years authorities responsible for monetary control have indulged very largely in operations which have to a great extent obscured the working of the theory. It is true that gold has moved from country to country more or less freely in response to fluctuations in price-levels and/or exchange rates; but in a modern community credit has as important a bearing upon the price level as has money or gold itself; and the volume of credit within a country is not absolutely and rigidly tied to the volume of its gold.

For example, as a result of reparations and other war debt settlements, France and the United States accumulated vast stocks of gold during the period 1929-1931. But a large proportion of this gold was "sterilised", i.e., prevented from serving as the basis of additional currency and credit. Imports of gold were added to, and exports of gold subtracted from, the "sterilised" gold; and the price levels of those countries were not affected by variations in their gold holdings. Thus the automatic adjustment of price levels as a result of gold transfers did not take place.

To take another example, there is little doubt that when Great Britain returned to the gold standard in 1925, the parity adopted greatly "overvalued" the pound in relation to the current price levels

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in this and other countries. But, although we lost large quantities of gold, we succeeded in maintaining both the internal and external value of the pound by dint of heavy short-term borrowings abroad. The fact that we were eventually forced off the gold standard in 1931 is, of course, a vindication of the ultimate truth of the purchasing power parity theory; but it shows also the time which a "long-term tendency" may take to work itself out.

✓ **The Importance of the Purchasing Power Parity Theory.**—In spite of these drawbacks, the purchasing power parity theory of the exchanges is of the greatest importance inasmuch as it is the only theory which is applicable to all types of currencies, to all systems of money and to all conditions of the exchanges. It is the only theory which explains the relationship between currencies which are on an effective gold standard as well as the relationship between those which are hopelessly depreciated through the issue of inconvertible paper.

Moreover, the theory is superior to the old balance of trade theory of the exchanges enunciated by Goschen and his successors because it is more fundamental. It goes further than a mere statement of the fairly obvious fact that the rates of exchange are determined by the balance of indebtedness. *It explains how that balance of trade or of indebtedness is itself determined.* The rates of exchange between any two countries are determined in the long run, as we have seen, by the relative price levels of the two countries. If the exchange rates do not properly reflect the relative position of those price levels, goods and money tend to flow between the two countries in such direction that equilibrium tends to be reached at the purchasing power parity. In other words, the direction of trade and the flow of capital are changed until the rates of exchange truly represent the relation between ✓ the values of the currencies of the countries engaged in that trade.

If two countries rigidly maintain the gold standard, the exchange rate between them will fluctuate only slightly on either side of the mint par between the limits imposed by the gold points, i.e., the cost of buying gold in one country and selling it in another. If both countries give up the gold standard, and inflate their currencies *to the same extent* by the issue of inconvertible paper money, then the rate of exchange between them will still remain near the mint parity because the *relative* purchasing power of their currencies is unchanged and there is no divergence between the values of the two currencies sufficient to warrant a change in the direction of trade. But if one of those countries resorts to further inflation whilst the other country maintains the existing position, then forces at once begin to bring

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about an entirely new purchasing power parity, and, through a change in the direction of trade, an adjustment of the exchange rate to the new parity.

Suppose that country A maintains the existing value of her currency, whereas country B doubles the quantity of her inconvertible currency. Prices in A remain as they were, whereas prices in B are doubled. This will make B a good country in which A may sell goods but a bad country in which A may buy. B's imports from A are encouraged and her exports are discouraged. Thus the balance of trade between the two countries is changed and this sets in motion an adjustment of the exchange rate, which moves in A's favour until it reflects the full depreciation in the currency of B, i.e., until it reaches the new purchasing power parity.

The operation of the theory between two *gold standard* countries whose price levels have diverged first effects an adjustment of the exchange rate to the new parity. This in turn results in the movement of gold from one country to the other and so brings the price levels back to equilibrium.

Finally, we may observe that a grasp of the purchasing power parity theory is essential to an understanding of the basis on which the reorganisation of the world's currencies had to be effected in consequence of the War, and, as we shall see later, it is essential also to an understanding of the methods now adopted by the world's central banks to control the credit position and regulate the exchange rates of their respective countries.

X. "from page 57"

1) The relative values of national currencies which are of the gold standard are determined in the long run mainly by their relative ~~exchange~~ purchasing powers in the goods & services. G.D.H. Cole

2) While the value of unit of one currency in terms of another currency is determined at any particular time, by the market conditions of demand & supply, in the long run this value is determined by the relative values of the two currencies as indicated by their relative prices of goods & services. -

CHAPTER IV

THE GOLD POINTS

(FROM the practical standpoint, the specie points between any two gold standard countries are the rates of exchange at which it becomes profitable for a bullion arbitrageur to make a profit by covering a sale of one currency in exchange for another by shipping gold between the two countries concerned. From this it follows that the specie points must act as limits to the fluctuations in the rates of exchange between any two gold standard countries, for one reason because settlements will not be effected by the ordinary credit methods if they can be effected more cheaply by remitting gold, and for another reason because the operations of bullion dealers in snatching profits when rates of exchange move beyond the gold points must tend to remove the margin which makes those profits possible.)

We have already noticed that the transfer of gold from one country to another involves, besides its purchase in the one country and its sale in another, the incurring of various expenses for such items as freight, packing, insurance and assaying. In addition, those responsible for the movement of the metal have to make allowance for the interest lost between the date on which they buy the gold and the date on which they receive payment in the foreign centre.

Freight Charges.—These are usually the chief item of cost, and they vary for a number of reasons. They will be relatively less per unit on a large consignment than on a small one, while they may differ from time to time because one shipper is able to make a better contract for the transport of the metal than another, or because freight and transport costs generally have changed. Competition for gold shipments as between the shipping companies and other agents is extremely keen, and freight rates are not only cut to a minimum but vary considerably from time to time according to the relative convenience of the shippers and other circumstances. Again, very large consignments may be sent by more than one boat, with the result that freight charges will be relatively greater per unit, although insurance charges will be less, than in the case of a heavy consignment sent in one parcel.

Usually the shipper obtains a quotation for a "through" rate of freight which covers carriage by rail and/or sea, together with transhipment from one conveyance to another.

Competition of Air Transport.—An important factor affecting freight charges is the competition of air transport. Between European centres, particularly, this method is now almost always used by reason of its advantages of speed, smaller risk of loss from theft and relatively low cost—the latter chiefly because little or no interest is lost on account of time taken in transit, and because, on small consignments such as can ordinarily be conveyed by aeroplane, the freight is less by air than by rail and sea (see Chapter XXVI).

One result of this saving of time and cost by air transport is that gold movements between European centres have tended to be smaller but more frequent, because operators have been able to take advantage of the opportunities for profit to be gained by moving consignments of relatively small dimension, and because aeroplane transport is not always available at a moment's notice to take gold bullion in at all large quantities.

The Interest Factor.—Those who buy gold in one centre to sell in another cover themselves at once either by selling the currency of the receiving centre spot or by selling it forward. Arbitrageurs who have the necessary funds available sell spot and replenish their foreign balances in due course from the proceeds of the gold; others who have not sufficient funds at their disposal sell the foreign currency forward, and meet their contract out of the proceeds of the gold. In either case, the dealers are out of the funds invested in the gold until it arrives and is realised, so they must naturally take into account any loss of interest involved during the time of transmission.

The rate of interest to be taken into account by the exporter will depend on his method of covering. If he sells the foreign currency equivalent of the gold *forward* for delivery on the date when the proceeds are available in the importing centre, he is out of his funds *in the exporting centre*, and will lose interest at the rate at which he could have employed his funds there. If, on the other hand, he sells the currency equivalent at once (i.e., *spot*) in his own market, he will be out of his funds *in the importing centre* until he gets paid for the gold, so he must reckon interest at the rate he could have earned or will be charged in that centre. Which method he will adopt will depend on the disposition of his funds, on the interest rates ruling in the two centres, and on the margin between the spot and forward exchange rates.

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The element of interest is thus of great importance, especially in gold movements between distant centres. The amount of interest lost during the shipment of the metal will, of course, depend essentially on the prevailing value of short-term funds, i.e., on call-money rates, and on the speed with which the transfer is effected. Exporters of gold will save interest if they are able to ship the metal by a fast boat, and for this reason gold shipments between London and New York are made wherever possible by the *Mauretania*, *Bremen*, *Europa* and similar first-class vessels. By using one of these vessels instead of a slow boat as much as two days' interest may be saved, quite an appreciable item on a large consignment. Hence, if a fast boat to New York is available soon after the arrival of bullion from South Africa in London, the gold can be taken from London at an appreciably higher rate of exchange (i.e., a lower sterling cost) than if a slow boat only were due to sail. On the other hand, the absence of a fast boat may so affect the interest position as to prevent a movement of gold which would otherwise be made.

Between London and New York, the voyage is shorter by about one day in winter than it is in summer, because in summer the ships have to take a more southerly route in order to avoid the icebergs which drift down from the Arctic at this time of the year.

When interest rates are high, the question of speedy transfer is of considerable importance. Every extra day taken by the journey from London to New York, or from South Africa to London, means an additional loss of interest whilst the metal is in transit. Hence, in times of high interest, the movement of gold from London to New York may just be prevented on a fall in the exchange merely because there is no fast boat immediately available, and in the same way the difficulty of obtaining aeroplane accommodation at short notice may be sufficient to prevent the export of gold from London to a continental centre.

When interest rates are low, as they are at the time of writing, the importance of interest as an expense factor is, of course, markedly reduced.

In certain circumstances, the interest factor may be ignored altogether. Suppose, for example, that a large bank holding considerable balances in a foreign centre decides to withdraw some portion of those balances in the form of gold. Since the banks do not reckon to earn interest on their purely cash holdings, they are naturally in a position to ignore interest lost during transit in the case of a movement of the type here discussed. As a result, it may be profitable for a bank to

move gold when the position of the exchange is not such as to induce other institutions to undertake gold shipments. Again, it is obvious that a foreign bank which purchases gold with a non-interest-earning balance at the Bank of England, will naturally ignore any loss of interest; for no loss is involved. On the other hand, a foreign bank which sells English Treasury Bills in order to purchase gold from London loses interest by so doing, and must reckon this loss of interest in the cost of the shipment.

Insurance.—It has already been mentioned that the cost of insuring a consignment of gold grows heavier as the size of the consignment increases. This is because underwriters refuse to take more than a certain share in the risk unless they are paid a higher rate of premium for the excess. If, for instance, £750,000 of gold has to be insured, the premium on the first £300,000 may be, say, 1s. 9%, that on the next £200,000, say, 1s. 6d. %, that on the next £200,000, 2s. %, and the premium on the last £50,000, 2s. 6d. %.

Moreover, the greater the amount that is sent in one ship, the higher the rate of premium. It must be remembered here that a shipper has to contend with the operations of other shippers, and, at a time when large shipments are being made from the same centre, one shipper may have to pay a higher premium merely because another shipper has arranged to send gold on the same vessel. To some extent bullion dealers can guard against this risk by arranging "floating" policies at a predetermined rate, under which they are allowed to declare each shipment as it is made.

Brokerages in respect of sales or purchases of gold are payable only in London, for in foreign centres there are no open markets for the metal. In London, a broker must be employed in respect of all deals carried out with the Bullion Market, and, in practice, the services of a broker are utilised also in respect of gold sold to or purchased from the Bank of England.

Packing.—A further item for which allowance must be made is the cost of *packing* the gold. The shipper may either undertake this himself or entrust it to the broker. Not only must the gold be carefully and securely packed in wooden boxes or cases, but also its handling must be supervised and protected throughout, as also must the loading and unloading. This item is, however, relatively small.

Special Charges on the Purchase or Sale of Bullion.—In calculating the out-turn of a gold shipment, due allowance must, of course, be made for any special addition made, on the one side, to the buying price of the metal, and for any deduction made, on the other side, for mintage

or assaying. As a rule, there is in gold standard countries a fixed legal price at which the central bank or monetary authority must buy all gold offered to it, and either the same or another price at which it must sell gold on demand. Actually, however, a seller of gold will not realise the full legally fixed price, for he will ordinarily be required to pay melting and assay charges. In addition, the seller must ordinarily take into account the loss of interest which is occasioned because credit for all the gold is not given until it has been in the hands of the receiving bank or authority for some days, most of which are taken up by the assaying and refining.

At the time of writing, for instance, the United States Treasury must buy all gold offered to it at the rate of \$35 per fine oz., but on delivery of the gold, credit is given for only 97 or 98 % of the total, the balance being retained for assaying, for 20 to 28 days, during which time the seller loses interest, which otherwise could have been earned on the funds invested in the gold (see also *post*, Chapter XXVI).

Gold Points are in no Sense "Fixed".—It follows then that the yield obtained by buying gold in one country and selling it in another varies from time to time and can never be fixed with any degree of exactness. The exact cost, however, is immaterial. The point to remember is that gold shipped from one centre to another, after allowing for the expense of getting it there, yields a definite net rate of exchange, which varies from time to time as the expenses and other elements vary.

Pre-War Specie Points.—Now in pre-war days, when monetary and other conditions were far more stable than they are to-day, gold could usually be bought or sold in the leading world centres at prices which approximated very closely to the rates at which the metal was minted into the standard coins. In London, for instance, the Bank of England was legally bound to buy all gold offered to it at the price of £3 17s. 9d. per standard ounce. Similarly, the United States Treasury had a fixed price of \$20·67183 per ounce fine at which it would buy or sell any quantity of gold. Moreover, gold coins were in wide circulation in all the leading countries, and it was always possible, therefore, to obtain such coins in quantity for export to other countries even if gold could not be easily obtained from the central banks.

Such coins were readily purchased on the basis of their fine gold content by any central bank or monetary authority, which would either melt down the coins and re-mint them into its own coinage, or hold them in their original form for eventual re-export.

Again, the movement of gold between the leading world centres was so much a matter of fixed routine and fixed charges for the different items of cost that the total expenses involved were relatively stable. Of course, changes in the items of cost *did* take place from time to time; interest charges were naturally not fixed, whilst the *all-in* price at which gold could be bought or sold, even in London, was subject to some slight variation.

Usually, gold exported from this country was obtained by exchanging notes for gold at the Issue Department of the Bank of England, which was always willing to deliver sovereigns or bar-gold for its notes at the Mint Price of £3 17s. 10½d. per oz. of standard gold, $\frac{11}{12}$ ths fine, equivalent to about £4 4s. 11½d. per oz. of *fine* gold. If demand was pressing, however, the Bank took advantage of the position and charged a penny or two extra for bar-gold, which is preferred for export owing to its greater convenience, or it issued *light-weight* sovereigns, which meant that the equivalent selling price might be as high as £3 18s. 2d. per ounce. Under the Gold Standard Act, 1925, the Bank of England could at its option encash its notes with gold in the form of sovereigns or of bars, so long as the amount was not less than 400 ounces of fine gold. Hence, light coins could still, if necessary, be issued.

In the centre to which such coins were exported they were, of course, regarded merely as so much bullion, and credit was given for them only according to their weight. In calculating the out-turn of a gold shipment, therefore, due allowance had to be made for any increased cost of the gold due to the presence of light-weight coins in a consignment of the metal.

Even if the Bank paid out gold in the form of bars, its only obligation was to supply bars of the standard fineness of $\frac{11}{12}$ ths; though it would usually supply *fine* (i.e., pure) gold upon request.

In marked contrast to conditions to-day, however, costs such as freight, insurance, packing and assaying were subject to very little change over a long period. Actually, the changes in the total expenses were so small that it was usual, before the War, to quote an average *all-in* figure to represent the total cost of moving gold, including the necessary allowances for interest between London and the leading world centres; e.g., 10 centimes per £1, or about 4 per mille, between London and Paris, 5 per mille between London and Berlin, and so on.

As the leading countries were at this period all on the gold standard, the *gross* rate (i.e., neglecting expenses) obtained by the purchase of

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gold coins in one of them and their sale in the other would be approximately the Mint Par of Exchange between the two countries, so, to obtain the gold points, all that was necessary was to add to or deduct from the mint parity the customary allowance for expenses, thus:—

London and Paris.

	Incoming. (To England.)	Outgoing. (From England.)
Mint Par	25·2215	25·2215
Expenses	-10	-10
Specie Points	<u>25·3215</u>	<u>25·1215</u>

London and New York.

Expenses from London to New York were usually given as 8 per mille, and those from New York to London as 5 per mille.

	Incoming. (To England.)	Outgoing (From England.)
Mint Par	4·866	4·866
Add expenses 5 per mille	-024	
		Deduct expenses 8 per mille
Specie Points	<u>\$4·819</u>	<u>·039</u> <u>\$4·827</u>

London and Berlin.

The German Mint Par in pre-war days was, numerically, the same as it is to-day, viz., 20·429 marks per £1, and the expenses of moving gold between that country and Britain were invariably given as 5 per mille. Hence:—

	Incoming. (To England.)	Outgoing. (From England.)
Mint Par	20·429	20·429
Expenses 5 per mille	-102	-102
Specie Points	<u>20·531</u>	<u>20·327</u>

In the case of France, for instance, the outgoing figures meant that, if sovereigns were transmitted to Paris for sale to the Bank of France at its legal buying price, the net "out-turn" of the shipment after deduction of all costs would be Fcs. 25·1215 per £1. In other words, the rate of exchange obtained by sending sovereigns from London to Paris was approximately Fcs. 25·1215 per £1. Likewise, the incoming figures from New York, for instance, meant that, if gold dollars were shipped from America and sold to the Bank of England at its fixed buying price of £3 17s. 9d. per ounce *standard*, the net rate of exchange produced, after deduction of all expenses, would be approximately \$4·89 per £1.

Present-Day Specie Points.—Although it has long been the practice to use the term "specie point" in connection with the rates of exchange between gold standard countries, there is a tendency, now that so many of the leading countries have abandoned the gold standard, to use the

term in a rather wider sense to mean the rate of exchange at which it is profitable to move gold between any two countries, *whether they are on the gold standard or not.*) But there remains the important difference that, whereas between gold standard countries the specie points act as well-known and relatively stable limits to the rates of exchange, the so-called "specie points" between a non-gold country and a gold country, or between two non-gold countries, are the frequently varying exchange rates at which gold arbitrageurs find it profitable to move gold from one country to another, and, while in a gold standard country the price of gold is fixed by law and is not affected by the prevailing rates of exchange, in a non-gold country the price of gold depends directly on the rates of exchange between that country and countries which are on the gold standard.

At the time of writing, for example, the gold standard is suspended in Britain but is effective in France, where the metal can be bought from and sold to the Bank of France at fixed prices. Now a London bullion dealer who wishes to import gold from Paris must obtain the requisite quantity of francs for its purchase, and, as the Bank of France sells at a fixed price, the price at which the gold will be sold in London will depend mainly on the rate of exchange between London and Paris. The price of gold in London thus calculated by applying the London-Paris rate of exchange to convert the Bank of France's buying price into sterling is called the *French* (or *franc*) *parity price*. If the price is calculated by reference to the New York-London exchange and the U.S. Treasury price for gold, the figure so obtained is called the *New York* (or *American*) *parity price* (see Chapter XVI).

Even as between countries which are still on the gold standard there are a number of factors which make the calculation of the present-day specie points a matter of great complexity.

To-day, gold coins have disappeared from circulation throughout the world and the gold standard is nothing like the fixture that it used to be. There is nowadays far less certainty concerning either the price at which gold can be obtained (if at all) in the one country or the price at which it can be realised in another. The conditions under which gold can be obtained from or sold to the central banks, and the charges which are imposed by those banks for minting and assaying, are subject to frequent change.

Actually, most of the so-called "gold countries" now maintain what may be called "one-sided" or "one-way" gold markets. The central authorities concerned are usually compelled by law to *buy* all *fine* gold offered to them, but, when they are asked to *sell* gold,

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they resort to various devices to avoid the unpleasant necessity of doing so. Thus the central bank of a gold country may fall back on its legal right to sell gold *exchange* (i.e., credit remittances on gold standard centres) instead of actual gold, or the central bank may impose an exporting charge or an assaying fee, or insist on paying out light foreign coins (e.g., the Argentine in 1929), or obsolete foreign coins, or foreign coins of a country other than the one to which the gold is being shipped, or bars of lower fineness than 900 (i.e., bars which necessitate additional refining charges), thus reducing the out-turn or otherwise discouraging a shipment.

Again, the price at which gold would be bought by the United States Treasury was several times changed in 1933 as part of President Roosevelt's policy of reflation, while the Bank of France, as part of her policy of defending the gold standard at all costs, has, since 1928, several times altered the conditions under which she would buy or sell gold in quantity. For example, the Bank has reduced its assay charge in order to encourage imports of gold, and, though it has been consistently prepared to deliver gold at the official selling price, it has from time to time kept exporters waiting a day or two for delivery and has occasionally issued gold of lower fineness than usual, so, of course, increasing the refining charges which the exporter had to meet in the importing centre.

On the other hand, there have been instances where countries have resorted to various expedients with the object of *encouraging* the outflow of gold. Thus, in the United States, the Federal Reserve authorities have on occasion delivered gold free on board ship and thus saved exporters certain incidental expenses on that side.

So far as non-gold countries are concerned, it is now impossible to say that, when their exchanges reach a certain level, gold will flow inwards or flow outwards: such countries are not, of course, likely to impose restrictions on the *import* of gold, but only in exceptional circumstances will gold exports from such countries be made in response to ordinary exchange conditions. If gold is moved at all from one of these countries, it is almost always moved by the central bank. Some gold may be moved by hoarders, but as there is no free gold market in most of these countries, bullion for export cannot be obtained from the central bank at a *legally fixed price*. It must be purchased, if at all, from the central bank or from some other source at the *current market price*, which price will be the world price of gold expressed in terms of the currency of the country concerned.

Britain's position is rather better than that of other non-gold

countries. Although the gold standard is suspended in this country, London is still the world's principal gold market and the only free market to which newly mined gold can be sent, so that gold for *export*, though no longer obtainable from the Bank of England, can still be purchased without difficulty from the London Bullion Market at the prevailing market price. On the other hand, gold imported into this country will be sold, not to the Bank of England as it used to be, at the Bank's legally fixed buying price, but on the London Bullion Market for whatever price it will fetch. And this sterling price will vary, for the reasons previously given, with every change in the rates of exchange between London and the leading gold standard centres. As there is now no stability in exchange rates between sterling and other currencies, and, therefore, no fixity about the price quoted on the London Bullion Market for gold, it follows that the specie points between this country and other countries are continually changing and that it is now not possible, as it was in pre-war days, to give a stable figure to represent the cost of buying gold in this country and selling it abroad, or *vice versa*.

Apart from changes in the London price of gold, variations in the other items of cost are now of very frequent occurrence. Freight charges are not nearly as stable as they used to be, partly because increased competition between the shipping companies themselves, and between the shipping companies and air lines, has led to a steady reduction and has brought these charges far below the pre-war level. Other charges, especially insurance, have been subject to similar cuts, while rates of interest have become a most variable factor.

Refining and Assay. - When gold is sold by a leading central bank or monetary authority it will usually give its own certificate of the fineness of the metal and due allowance for that fineness will be made in the price demanded from the buyer. When gold is sold to a central bank, however, it will usually require to have the metal assayed and possibly refined to that standard of purity or fineness which it is authorised to accept: most central banks are required to buy "fine" gold, though a margin of 5 per 1,000 is usually permitted, i.e., a variation down to 995 fine. The Bank of France, for example, will ordinarily accept only gold which is of 995 fineness and upwards, so that if British standard gold (916½ fine) is offered to that Bank, as frequently happens, the Bank makes a charge for assaying and refining. Practically all central banks, therefore, make a stipulated charge to cover the cost of refining any gold offered to them which is below their customary fineness, whilst others make a charge for minting into coin (though the

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metal may, in fact, never be minted). In addition, a charge will be made for assaying unless an acceptable certificate of assay accompanies the gold. As these charges are varied from time to time, they necessarily affect the price at which gold can be bought or the price at which it can be realised in the centres concerned. Moreover, assaying and refining all take time, and there may be special delay at times when the refineries, whose daily capacity is limited, are being asked to handle more metal than they can reasonably cope with (see page 73).

Bullion dealers must, of course, allow for any such period during which the bullion is passing through the refineries and so losing interest. If, for instance, a dealer has arranged a shipment of £1,000,000 British standard gold from London to Paris, the gold will normally take a day or two to refine in London, and can only be sent over to Paris piecemeal as it is received from the refiners. In the meantime the dealer who has purchased the gold for sale in Paris will have sold the anticipated franc proceeds on the Foreign Exchange Market, but, pending the arrival of the gold in Paris, he will be unable to effect delivery and will, therefore, be in the position of incurring an overdraft in Paris for part of his sale of francs. Even if the franc proceeds have been sold *forward*, the position will be little different, since the margin between spot and forward francs will follow the cost of obtaining an overdraft in Paris. The London dealer must, therefore, take the interest on such an overdraft into account in estimating the out-turn of a shipment of gold to Paris.

This fact was the cause of an interesting situation in 1930, when the Bank of England, which had for a year or more been faced with a steady outflow of gold to France, announced its intention of paying out only *standard* gold. At that time the Bank of France would buy only fine gold or gold of the standard fineness of $\frac{9}{10}$ ths, so the action of the Bank of England had the effect of lowering the export specie point to Paris by the cost of refining the gold and also of limiting gold transfers to about £300,000 daily, as this was the maximum capacity of the London refineries. It was said that this step was taken by the Bank of England because it had exhausted its stock of fine gold; but there is no doubt that the Bank of France co-operated so that the arrangement should restrict gold movements from London. In January, 1930, when the situation had somewhat eased, the French central bank announced its willingness to accept British standard gold.

Similar conditions applied during the great gold rush from Paris

to London which in 1933-34 followed President Roosevelt's decree empowering the United States Treasury to buy all gold offered to it at a higher price than had formerly ruled. Much of this gold passed to the United States from Paris *via* London. The demand on the Bank of France proved greater than its facilities could cope with, so the London price of gold was at times as much as 4s. over the French parity price; yet bullion arbitrageurs could not take full advantage of the premium to make profits for themselves because it was physically impossible to get the gold across the Channel in sufficient quantity and within the necessary limits of time.

For the same reasons the United States parity price at this period was for days at a time much above the market price ruling in London though bullion dealers in all countries were making use of every inch of liner space to move gold from London and the Continent to New York. So long as a profit could be obtained by moving gold, it is obvious that banking and financial concerns with the necessary capital available would attempt to transfer bullion from one country to the other: but their efforts in this regard were limited by such facts as the capacity of the refineries in London and in New York; by the capacity of the United States Treasury to handle the gold; by the amount of space available on the ocean liners, and by the limit to the amount of gold per ship which underwriters were willing to cover by insurance.

CHAPTER V

FOREIGN EXCHANGE MARKETS

JUST as there are markets for the purchase and sale of the raw materials of commerce, so, also, in the financial centres of the world there are foreign exchange markets, where foreign currencies are bought and sold. In recent years, considerable changes have taken place not only in the organisation and structure of these markets, but also in the methods of transacting business between them. The local, personal markets in the various financial centres, where transactions were effected by informal conversation and bargaining between the dealers, are steadily losing much of their importance. In their place we have a complicated system of exchange and interchange conducted by telephone, telegraph and cable, and a thousand operations where once there were but a few.

Conditions before the War.—Before the Great War the cancellation of the multitude of debts arising between nations having a great variety of monetary units and systems—a task which at first sight would appear well-nigh hopeless—had reduced itself to the comparatively simple process of buying and selling bills of exchange, which represented the debts due by the nationals of the various countries to one another. So far as Britain was concerned, the process of settlement was even simpler than in the case of any other country, for her merchants and manufacturers would have little to do with foreign currencies, and, as a result, the vast proportion of her foreign business was conducted in her own currency—sterling.

To understand clearly how this position arose and was allowed to persist, we must revert again to the elementary theory underlying the settlement of debt by means of the bill of exchange, that instrument which, by reason of its simplicity and ready acceptability throughout the world, for a long period of years maintained its pre-eminence as the chief medium for the settlement of international obligations.

To Effect Settlement, One Country Only need Draw.—It is apparent,

if we visualise the merchants of two countries in two aggregates, that because the bills drawn by the creditors of A upon their debtors in B can be purchased and remitted by the debtors of A to pay their creditors in B, only one of the countries need draw upon the other in order to settle the debts arising between them. In practice both countries draw, but in the case of Great Britain the bills drawn by her traders have been for many years past vastly outnumbered by the bills drawn by foreign traders on this country, and, in particular, on London.

London— the World's Chief Financial Centre.—The reason for this is to be found in the fact that, partly by chance, but mainly by hard work, London has established herself as the chief settling place of international indebtedness, the world's foremost financial centre, and, to a great extent, the world's commercial clearing-house. In spite of the tremendous handicap imposed by Britain's part in the world conflict, and in spite of the keen competition of rival centres more happily situated during the Great War, London still retains her leadership, which is attributable to the following main factors:—

- (1) For two centuries British manufacturers and merchants have led the world in industry and foreign trade, and the greater part of the products of the world's industry has been transported in British ships. Great Britain has been the great coloniser of the world, and wherever her sons have penetrated British trade has followed. The world-wide extension of British commerce creates everywhere a demand for bills on London.
- (2) England, more through a happy accident than from settled policy, was the first country in the world to adopt the gold standard, which gave her that great precondition of all industrial progress, viz., a stable currency.
- (3) London is the greatest free market for gold in the world. Most of the world's gold gravitates to London for sale, and, ordinarily, no restrictions are imposed by this country either on the export or on the import of the metal, though such restrictions have long been common in other prominent gold standard countries. In ordinary circumstances, therefore, a bill on London can without difficulty be converted into gold if gold is required, and sterling has come to be regarded everywhere as being the surest medium for obtaining gold. Though, as a result of our suspension of the gold standard

in September, 1931, Bank of England notes are no longer convertible into gold, London remains the world's greatest free gold market, and gold in quantity cannot be obtained anywhere as quickly and as easily as it can be in London.

- (4) British firms, accepting houses, and banks have a world-wide reputation for prudence, fair dealing, and integrity. Bills bearing the names of well-known English firms are freely accepted throughout the world, and still more true is this of bills bearing the signatures of London bankers and accepting houses.
- (5) London acted as the pioneer in insurance business and her international maritime agencies—in particular Lloyd's—have established themselves in an impregnable position in relationship to the world's shipping and marine insurance business. Thus the safety and security of vast international trading operations are dependent on the financial strength of the London underwriting market, and it stands to the world-wide credit of that market that the confidence therein has never been abused.
- (6) The enormous extent of our commerce and loans to foreign nations gave us large pecuniary interests in every country, and made the United Kingdom a great creditor nation.

The great profits we derived from our commerce and the handsome revenues we received for our shipping, banking, and insurance services to other nations, created for us that "ability to lend" which established our financial leadership, while the world-wide use of sterling as an international currency compelled every country to maintain balances in London, and contributed in part to making London the cheapest centre in which to borrow.

In this way we not only accumulated an enormous holding of overseas investments, but, with each new investment, our range of customers extended and our resources increased, thus strengthening London's position as the market for long-term capital investments and as the centre for that short-term financing so vital to international trade.

- (7) The fortunate geographical position of the British Islands relative to the land masses of the earth; the stability of our Government, and the respect for duly constituted authority usually characteristic of our people; the efficiency of our banking system; and the general reputa-

tion enjoyed by persons of British blood for reasonableness and fair-minded dealing have all, in their degree, contributed to consolidate the position won for London by the enterprise of our manufacturers, the technical aptitude of our artisans, and the sound quality of our products.

- (8) Finally, we may note a factor which is probably implied in the foregoing enumeration, and that is the wonderful and unique organisation of the London Money Market, particularly its adaptability to changing conditions, its extensive and varied resources, and its pre-eminent discount market, whose members have a knowledge, as remarkable as it is unrivalled, of the names and standing of commercial firms in all parts of the world. A vital requisite for a great financial world centre is a healthy, active, and regular discount market, and the existence in London of such a market, built upon the solid foundations of long experience, sound finance, and unfailing punctuality, was a potent factor contributing to the establishment of London as the world's foremost financial centre.

London Bills an International Currency.—The pre-eminent position of London as an international financial centre naturally created a world-wide prestige for the sterling bill of exchange. Bills on London are to be found wherever men trade. They are accepted almost as freely as gold itself, passing throughout the world as a kind of international currency universally taken in payment of debt. It is a world-recognised practice to use such bills not only to settle debts arising from foreign trade in which this country is directly implicated either as exporter or importer, but also to settle a large proportion of the debts arising between foreign nations in respect of goods which never touch our shores. In such circumstances London figures merely as a financing agent, and, of course, exacts a commission for its services in that capacity. Thus a German merchant importing goods, say, from San Francisco, may arrange for the American exporter to obtain payment by drawing bills on a London bank or accepting house with which the German merchant has opened a credit.

Likewise, a Chinese merchant selling tea to France may stipulate in the contract of sale that he shall obtain payment by drawing his bill on a London bank, with which he would expect a credit in his favour to be opened by the French importer. London banks,

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accepting houses, and large British merchant firms, by accepting bills drawn on them for foreign account, make themselves liable for huge sums in the aggregate, and annually earn considerable sums by way of commission for their services.

Settlements with Britain were Initiated Abroad.—This state of affairs is still of great consequence, but in pre-war days, when most of the world's business was settled by bills of exchange, it was particularly important. It meant, in the first place, that the British exporter became accustomed to expect in payment for his goods a bill drawn on and payable in London in sterling, while, on his part, the British importer expected to pay for his goods by being drawn upon in sterling. Neither the London exporter nor the importer troubled much about the rate of exchange. Their contract was to receive or to pay so much sterling. By leaving the exchange operation to the foreigner, the British trader was to a great extent rid of the trouble of buying or selling foreign currencies, and of having to quote prices, draw up invoices, and issue catalogues in foreign money. If he was a seller, he quoted and charged in sterling and expected to get the sterling amount, neither more nor less, for his goods. If he was a buyer, he contracted for goods at a price in sterling and paid that and no more.

The Standpoint of the Foreign Merchant.—It was otherwise with the foreign trader who had to sell or buy a bill on London. Variations in the rate of exchange were of great concern to him, since they affected the amount which he had to receive or pay for his bills, and if he was able to make a good bargain when buying or selling bills he reaped the benefit of it. He usually made a study of the exchanges and was well content to accept the chance of snatching an additional profit on the transaction arising from a change in his favour of the rate of exchange. Contracting to sell or to buy at a stated price, he often found that, when it came to receiving payment, or to paying for the goods, he could secure an additional advantage because the exchange on London had moved in his favour. If he was an exporter, he drew and sold his bill as soon as the goods were shipped, and so quickly recovered the capital invested in the goods, otherwise he would have had to wait for a remittance from London following actual receipt of the goods in this country. If he was an importer, he preferred to buy and remit a bill on London, for the price he had to pay for the bill depended upon his own success at bargaining, whereas, if a bill were drawn on him by his English creditor, the rate at which he would have to pay it would

generally be fixed by the London banker or broker who negotiated the instrument on behalf of the English drawer. Finally, the foreign merchant, wherever his domicile, was always sure of selling a bill on London at a good price, and, *per contra*, a bill on London could be bought in all centres of commerce.

London Exchange Rates were Fixed Abroad.—Other important results ensued. The fact that so great a proportion of the world's foreign exchange settlements were effected by means of the sterling bill, combined with the existence of unrivalled discount facilities on the London Money Market, established a distinct "business" in sterling exchange, which as likely as not brought profits to the holders quite additional to those arising from trade.

It has, in fact, been estimated that in pre-war days fully nine-tenths of our own trade and as much as one-half of the world's overseas trade were financed by sterling bills. Consequently, our rates of exchange with other nations were determined primarily by the relation between the demand for and the supply of such bills in the exchange markets of the world, and it may be said that the Foreign Exchange Market in former times consisted largely of the market in sterling bills in the principal financial centres. To these centres our financiers were well content to leave a considerable proportion of the risks and profits of exchange business, and incidentally also the fixing of the prevailing rates of exchange on London. The prices of bills on London (i.e., the rates of exchange on London) were fixed in the foreign centres where these bills were sold and negotiated, so that London herself had relatively little to do with deciding at what rates her currency should exchange for the currencies of other nations.

The London Foreign Exchange Market in Pre-War Days.—Such exchange business as was transacted on this side was almost entirely conducted through the medium of a few brokers by the London offices of the foreign and colonial banks and by a small number of old-established exchange bankers. Representatives of these institutions and the brokers met to form the actual bi-weekly market on the Royal Exchange, which was of a similar character to the foreign exchange markets in the chief Continental centres, although possibly not as important or as geographically extensive in its dealings. In fact, the importance of this market had considerably decreased even before the War, for the brokers had taken to the practice of making daily visits to the offices of the principal banks and of fixing up the exchange transactions for the day by personal interview.

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So far as the operations undertaken by our banks were concerned, they consisted chiefly in the purchase and sale of long bills of exchange, and in the issue of drafts on various world centres to meet the demands of the trading community. Arbitrage business was necessarily somewhat limited by reason of the relative stability of the rates of exchange, for movements such as we have been daily accustomed to see during recent years were almost unheard of in more normal circumstances, and such movements as did occur were generally anticipated and provided for in advance. The business of the exchange dealer was, in fact, largely confined to the sale of long bills and demand drafts, and, more rarely, cable transfers (see page 116), against purchases of sight bills and long bills on the same centre.

Thus the exchange banker conducted a profitable and non-speculative business by supplying drafts to order drawn on his balances with agents in foreign centres, the balances being replenished from time to time by the purchase of such bankers' and commercial long bills or sight drafts as happened to be available. When rates were fairly stable and there was an absence of marked fluctuation, it was not as imperative as it would be under present conditions that the banker should at once cover his sales of exchange by corresponding purchases, but it is clear that if his business of issuing drafts to order was to continue, he had to take steps to maintain his credit balances abroad or to reduce any overdraft which he might have created. In ordinary circumstances ample commercial cover would be available, but in the event of a scarcity of exchange on any centre or centres, resort would be had to the remittance of securities and ultimately to the transfer of gold or silver bullion, as the case might be.

Two other factors must be mentioned. The first concerns the comparatively restricted market in forward currencies, which was as yet in its infancy, dealings being limited to dollars and—to a much smaller extent—French francs. Secondly, it must be understood that the great majority of transactions were made through the medium of the post. The bulk of remittances were effected by the despatch of cheques and bills by the ordinary mail, those of larger amount consisting of parcels of bills on the centre concerned for collection and negotiation. Transfers of funds by cable (*cable transfers*) or by telegraph (*telegraphic transfers* or *T.T.*) were, as yet, little used.

The Changes in Recent Years.—Conditions to-day are vastly different. Not only has the attitude of London bankers towards

the foreign exchanges had to be revised, but the mechanism of the market has been completely altered and the volume of transactions—in London as well as in other important financial centres—has greatly increased. In many respects the changes which have taken place are directly attributable to the frequent and violent fluctuations in the rates of exchange consequent upon the uncertainty engendered by the War; on the other hand, they are no doubt traceable in part to that development which was bound to come sooner or later in order that the exigencies of modern commerce should be adequately and efficiently served.

At the end of the nineteenth century, the bill of exchange was still the basis of both internal and external trade, and formed the staple commodity dealt in on the London Foreign Exchange Market. Even before the War, however, the home trader had become too proud to accept a bill and preferred to settle his debts by paying cash or by issuing a cheque against a loan arranged with his banker. This tendency extended to foreign trade during and after the War, when the banks invaded the field of the accepting houses, and undertook to accept bills under credits opened by home and foreign exporters and importers. As a result, *bank drafts at sight* took the place of many *long trade bills*.

A New Mechanism.—Possibly the most striking change is that which concerns the mechanism of the market. Nowadays by far the greater proportion of exchange transactions is effected by telephone, cable or telegraph. Most of the world's exchange business now consists, as we have already observed, not essentially in the purchase and sale of bills of exchange on foreign centres, but in the purchase and sale of *rights* to foreign currencies, such rights existing usually as balances or merely credits with banks abroad. Actually, of course, no difference exists, for a bill of exchange on a particular country is merely a right to a given amount of the currency of that country.

One important result of the change is that long rates of exchange rarely appear nowadays as *published* quotations, although they are still quoted by the banks to their customers whenever required. Most exchange quotations published at the present time are for telegraphic transfers.

The payments are effected out of current accounts conducted by all bankers of importance with branches or agents in the foreign places, the accounts being maintained in credit not only by the pre-war method of remitting parcels of commercial bills when they are

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available, but also by the immediate purchase of cover *in the market*. Thus a London exchange dealer who sells a T.T. on New York for \$100,000 will immediately cover his sale by the purchase in the Exchange Market of a T.T. of corresponding amount, for in the present uncertain state of the world's exchanges rates fluctuate so considerably that bankers are careful not to keep too large balances in any centre and not to maintain an "open" or uncovered position in any currency for longer than is absolutely essential.

The Altered "Internal" Mechanism.—In London, as in other great centres, the "internal" mechanism of the market has also undergone a complete change. In most foreign centres the Bourse, or actual meeting of dealers in exchange, still persists, but it has not a tithe of its former importance. The structure of the London Foreign Exchange Market is dealt with later in this chapter, but at this point it may be stated that the comparatively leisurely manner of buying and selling bills by personal interview is entirely superseded. The exchange market to-day consists of a certain number of dealers and brokers in constant telephonic communication not only with one another, but also with dealers in other centres, while they are linked up with more distant places by the telegraph and cable. Deals are conducted with amazing rapidity and with startling frequency, the transactions in each important currency aggregating very large sums. So closely connected are the dealers in each centre with those in other places that the adjustment of rates of all Continental markets with those of New York and London is merely the matter of a few minutes.

The Vast Increase in the Volume of Operations.—The vast increase in the volume of exchange transactions is traceable to a number of factors. In the first place, the greater rapidity and efficiency of the exchange mechanism itself has led to considerably increased and more frequent transfers of capital from one country to another in order to take advantage of better interest rates. Secondly, the frequent abnormal movements in the exchanges in recent years have provoked international speculation in foreign currencies on an enormous scale—in many cases with such detrimental effects that active Government intervention has been necessary to abate the evil.

Then there is the fact, which is of special importance so far as this country is concerned, that, owing to the contraction of world markets and to the intense competition which now exists among sellers of goods, exporters have usually to quote prices and take payment in terms of the importer's currency. To-day, each country has

to be content to receive payment for a large part of its exports in the form of foreign currency, and an important result is that the sterling bill has lost some of its former prestige as a means of international settlement, while transactions in foreign currencies by British merchants are far more extensive and numerous than they used to be.

The Rise of London's Foreign Exchange Departments.—This growth in London's exchange business was one of the chief reasons for the changed attitude of our banks towards foreign exchange, for it meant that facilities had to be provided for the British trader who, no longer able to transact all his foreign business in sterling, had to be prepared to buy and sell in the currencies of other nations. Apart from the fact that the banks were naturally desirous of assisting their customers by the provision of complete exchange facilities, they could not but recognise the vast possibilities of an extension of their exchange business. Prior to 1914 the large joint stock banks kept few, if indeed any at all, operative currency accounts with banks abroad, and foreign business was largely conducted by them through the medium of the London offices of the foreign banks or through the head offices of those English banks then operating abroad. As a rule, settlement was immediately made on a sterling basis, thereby leaving both the exchange risk and the execution of any necessary covering operations to the foreign bank.

All this has now been changed, and all the big banks have of late years either inaugurated or expanded their foreign departments so that at the present time there is practically no class of foreign business which cannot be undertaken by these banks directly with agents or branches in all foreign centres of importance. As a natural result, the London list of exchange quotations has extended from the comparatively small Course of Exchange table of pre-war days to the much more comprehensive Foreign Exchange table of to day, embracing all the important centres of the world.

The Development of the Forward Market.—Finally must be mentioned the striking development in forward transactions, which are such a feature of the foreign exchange market at the present time. Such operations not only enable the banking and trading community to eliminate much of the risk which must necessarily accompany the frequent and sometimes violent movements characteristic of exchange rates in recent years, but also provide a means whereby exchange dealers can safely turn to profitable account high rates of interest ruling in other centres. Examples of the type of

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operation involved are included in Chapter XXX, while the theory underlying forward exchange is discussed in Chapter XI.

THE LONDON FOREIGN EXCHANGE MARKET TO-DAY.

We may now proceed to consider briefly the structure of the Foreign Exchange Market as it exists in London at the present time. In its chief aspects the organisation is typical of that which exists in the other financial centres of the world, and the description which follows should therefore serve to acquaint the reader still more closely with the mechanism of modern exchange dealing.

The real *members* of the London Foreign Exchange Market are the British and foreign banks, the accepting houses, and the other City finance houses, whose names are by custom accepted without cavil as "market names", i.e., as sound for any transactions into which they may enter with any other members of the Market. The foreign exchange business of these concerns is actually transacted by their specialist "*dealers*", who number in all about 100, and who are engaged throughout the day in the purchase and sale of foreign currencies on behalf of their respective institutions.

The Foreign Exchange Brokers.—As a general rule, present-day exchange operations are not effected directly between the dealers, but through the intermediary of exchange *brokers*, of whom there are about forty in the City at the time of writing. Each dealer is in direct telephonic communication with probably twenty brokers, who bear the cost of installing private telephone lines between themselves and the dealers, and, for a small commission, which constitutes their only profit, link up the dealers purchasing a particular currency with other dealers who are in a position to sell it. As a rule, each firm of brokers specialises in a certain group of currencies, and each dealer has direct lines to three or four firms operating in each of the various groups.

Most of these brokers can lay claim to long years of experience as exchange operators, but competition is so keen that clients and business soon drift away unless a high pitch of efficiency and a first-rate service are rigidly maintained.

Unlike the brokers on the Stock Exchange, or on a Produce Exchange, the foreign exchange broker has no professional status. Anyone, without any special qualifications, is perfectly free to set up as a broker in the Foreign Exchange Market. The only essentials to his success are that he shall understand his business; that he shall be sufficiently well acquainted with a few of the bank dealers to ensure

that some of their business will be passed through his hands, and that he is a member of the London Foreign Exchange Brokers' Association, which was formed in 1933 in consequence of the growing desire in the Market for some means of regulating the business, more especially as the dealers in the reputable banks had evinced a determination to confine their transactions to those brokers who showed a sense of responsibility and a proper recognition of the importance of their functions as part of the financial mechanism.

Whilst there are no rigid restrictions on the operations of brokers, it must be realised that, since a broker is entirely dependent for his business on the goodwill of the dealers, he is bound in practice to restrict his operations to those which meet with the approval of the dealers. For this reason a broker must act only as an intermediary: he must not buy or sell on his own account, nor must he endeavour to take any profit from the rate he quotes. Further, he must not deal with a bank or other institution which is not a recognised member of the Market: he is therefore precluded from dealing direct with members of the public or with Continental and other foreign banks.

As a foreign exchange broker is essentially an intermediary, he does not shoulder any of the risks incidental to exchange dealings. On the other hand, in spite of the comparative smallness of his commission, his earnings in a period of great speculative activity may be very considerable, and his promptitude, alertness, and general integrity may create for him a very lucrative and extensive business.

His function is to keep his clients, the bank dealers, posted with "two-way" (i.e., buying and selling) prices at which he finds buyers and sellers in the course of his enquiries round the Market. If his judgment is consistently faulty and he "reads" certain of his clients as buyers or sellers at various prices when, in fact, they are not so interested, then the prices he quotes will be found to be unreliable, his clients will fall away from him and will seek some other broker who can be counted upon to supply or take at least a reasonable quantity of the currency at the price which he has quoted. Hence, his success depends very largely on his judgment in determining whether the dealers on whom he is himself relying can be relied upon to deliver or accept the currency for which they have quoted him. If a dealer "lets him down", he has no redress; he must do his best to find another dealer who is willing to do business and so avoid having himself to disappoint the dealer who has taken him "firm".

The broker must also be an expert in mediation, or the art of compromise. He has to try to bridge the gap between buying and

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selling prices by persuading one party to come to the other's price or both parties to meet at the middle price. And, of course, he is largely kept "up to scratch" and in a high state of efficiency by the fact that the dealers, in their search for the best rates and the best services, are continually putting one broker in competition with others who deal in the same currency, and tend to pass their business through the broker who proves to be most deserving of confidence.

The Exchange Broker's Organisation.—It is clear that the performance of the comparatively simple functions here described does not necessitate any elaborate office organisation. In fact, the typical arrangement consists of a room containing one or more long tables around which are seated a number of assistants, each of whom has a telephone receiver connected with switchboards from which private lines emanate to possibly one hundred or more banks in the City. Each assistant transacts business with certain specified banks, and proceeds to discuss business as soon as the name of one of these banks is called by the switchboard operator. If the business is sufficiently large, separate rooms may be utilised for different currencies or groups of currencies. Thus one well-known firm has one large department transacting business in dollars only, while another department conducts operations in Continental currencies, and so on.

The actual conduct of business goes on at a rapid pace. An operator often has his finger on several prospective deals at the same time, and must continually switch over from one line to another. Moreover, considerable ability is required to bargain accurately and profitably in a room where possibly a dozen telephone conversations are being conducted simultaneously, and especially in view of the fact that the broker must listen to his colleagues with one ear, so as to catch at once any change in the rate in which he is operating, and at the same time carry on a conversation with his client.

The procedure is somewhat as follows. A dealer at one of the large joint stock banks rings through for a rate for the purchase of a given amount of dollars to be delivered in New York on the following day. From his knowledge of the tendency of the market or from the fact that he has offerings of dollars from other clients, the broker is generally in a position to quote a rate at once. Alternatively, he may require time to communicate with other customers in order to determine whether they have the dollars for disposal and if so at what rate.

The success of a broker, however, depends essentially upon his ability to keep pace with and to "read" the market, so that he can

immediately supply his clients with reliable two-way prices. His great object is to be "firm" at the prices he quotes, that is, to be prepared to take or to deliver some at least of the currency in question, and if he makes a "firm" price to a dealer he is bound (unless he wishes to lose future business) to stand by that price for a reasonable amount of the currency in question, say, \$50,000 or Fcs. 250,000.

In order to quote firm prices he relies, of course, on the statements which have been made to him by clients to whom he has spoken just previously, and who reveal themselves as probable buyers or sellers. Should he be taken at his firm price, say, by a seller, he at once communicates with his probable buyer, but if by chance the broker has been too long (usually more than two minutes is considered too long, but sometimes even thirty seconds is long enough for a dealer to cry off) he may find the probable buyer no longer wishes to function. Nevertheless, he is bound to support his price to the selling dealer who "took" him, and must therefore find another buyer for the currency which he has accepted, and himself bear the loss if the rate has moved unfavourably. This, in fact, is the only financial risk which a broker runs, but it will be appreciated that the amounts involved can be quite considerable if he makes firm prices without due care.

It will be clear that, as all business is done by word of mouth, a great deal must depend on whether the parties abide strictly by their agreements; but in practice any dealer or broker who proved unreliable in this respect would suffer either in the form of retaliation or from loss of business. The broker, especially, would soon lose his clients if his quotations were found unreliable or if he failed to stand by his firm offers, and it is for this reason that the broker will usually shoulder the loss himself rather than let a dealer down. It should be clear, moreover, that this informal method of transacting business makes it essential that members of the Market should be of first-class standing and reputation. Hence any *new* bank is only recognised as a member of the Market when the existing members are quite satisfied as to its standing, and by refusing to "take the name" of a new entrant to the Market, the existing members can soon make it impossible, or at least very difficult, for the firm concerned to transact exchange business as a member of the Market.

The Broker's Contract Note.—As soon as the rates are agreeable to both parties the bargain is concluded, the broker advises each dealer of the name of the other party, makes a note of the transaction

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on a book or pad in front of him, and in due course forwards to buyer and seller contract notes in the following forms :—

SPECIMENS OF EXCHANGE BROKERS' CONTRACT NOTES

(1) **To the Buyer**—BOUGHT CONTRACT FORM (on blue-tinted paper).

BOUGHT for your a/c.	Value Date, 25th June, 1925.
<i>Fcs. 250,000—T.T. Paris at 106·25.</i>	
OF Royal Bank of Canada, E.C.	
Bro. N^o.	
	BLANK, DASH & CO., LTD., FOREIGN EXCHANGE BROKERS, 999, London Wall, E.C. 2.
23rd June, 1925	

[Pencilled on the reverse is the name of the buyer (British Overseas Bank, Ltd.) to whom the messenger has to deliver the contract.]

(2) **To the Seller**—SOLD CONTRACT FORM (on dead-white paper).

SOLD for your a/c.	Value Date, 25th June, 1925.
<i>Fcs. 250,000—T.T. Paris at 106·25.</i>	
TO British Overseas Bank, Ltd., London, E.C.	
Bro. 10s.	
	BLANK, DASH & CO., LTD., FOREIGN EXCHANGE BROKERS, 999, London Wall, E.C. 2.
23rd June, 1925.	

[The seller's name (Royal Bank of Canada) is pencilled on the reverse as in the other case.]

“Value Dates.”—The contract notes give particulars of the amount, the rate, the names of the buyer and seller, and the *value date*, i.e., the date, usually two or three business days ahead, when the bargain is to become effective by the delivery or receipt of the currency in the foreign centre at the same time as sterling is paid or received in London. The value date also fixes the time from which interest can be charged or allowed as the case may be. Usually the currency

has to be paid over on the same day as the sterling is payable in London; thus the market terms "*valeur compensée*" and "*here and there*" mean that the value date of payment of the sterling and of the foreign currency is "compensated", or, in other words, that payment on both sides ("*here and there*") takes place the same day so that no loss of interest accrues to either party.

The following are the recognised value dates for the principal exchanges at the time of writing:—

New York or Montreal, T.T.	..	Value two days later.
cheque	..	Delivery same day, payment on the following day.
Belgium, France, Scandinavia, Holland, Switzerland, Spain	..	Value two days later.
Italy, Germany, Portugal, Austria, Czecho-Slovakia, India, Japan	..	Value three days later.
Rumania, Jugo-Slavia, Hungary, Bulgaria, Greece, Finland	..	Value seven days later.
Buenos Aires	.. ..	Value two days later.
Rio de Janeiro	.. ..	Value three days later.

Variations from these recognised value dates are made by mutual consent of the parties, while Western currencies are often dealt in "*value to day*", which implies the payment of sterling and delivery of currency on the day the deal is actually transacted.

Completion of the Deal. The contract note specifies the amount and rate of the deal, and also the name of the other party to the bargain. It is recognised as conclusive evidence of the contract, which must be fulfilled and cannot thereafter be varied by either party thereto. Consequently, the buyer and seller carefully check the contract notes, and in due course communicate with each other, confirming the purchase or sale and the delivery dates, and also the names of the agents in the foreign centres by whom and to whom respectively the currency is to be delivered. In the case of deals between the banks, these names are arranged by telephone by the respective "Instructions Departments", soon after each deal is completed, and later a confirmatory memorandum, known as an "Exchange Confirmation", is sent by each bank to the other.

The agents will be advised by mail, telephone or cable, as the case may be, and on the value date the whole transaction is finally completed by a sterling payment between buyer and seller in London, and by the transfer of the relative currency between the agents in the foreign centre. In the event of any default or delay in delivery, interest is charged at prevailing rates against the defaulting party from the value date, as already indicated. It is clear, however,

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that the omission of the dealer or his foreign agent to conform to the letter of the bargain is a serious matter for the dealer and for the other contracting party. Consequently, such happenings are of rare occurrence, but, if they do arise, the defaulting party hastens to make amends as soon as he possibly can.

One other point in relation to the broker may be mentioned, and that is the fact that as a rule he is not put to the necessity of making calculations, mechanical or otherwise, involving the conversion of one currency into another. He is concerned merely with linking up the purchase and sale of a given amount of currency at a given rate, and consequently his only calculation is that necessary to determine the amount of commission or brokerage chargeable to his clients for the transaction of the business.

The Foreign Exchange Dealer.—The foreign exchange dealers in the City include the expert operators in the foreign exchange departments of the London banks, accepting houses, and financial houses, together with a few independent firms of dealers in foreign exchange, who act mainly as London exchange agents for banks in other countries.

The functions of the exchange dealer in any institution of repute are of considerable difficulty and of far-reaching importance, for upon him devolve the duties and risks incidental to the purchase and sale of foreign currencies in large amounts, and at the same time the task of conducting arbitrage business through agents in other centres with the object of making profits out of differences in the prevailing rates of exchange. It is therefore not surprising that this work is confined to officials of a high degree of ability, and that even in the largest joint stock banks foreign exchange dealing is usually in the hands of not more than half a dozen operators, each of whom tends to specialise in a group of currencies or in one important currency. Furthermore, the essentially specialised nature of the dealings has resulted in the concentration of exchange business with India and the Far East in the hands of the London offices of the Eastern banks, and of business with the British Dominions and Colonies in the hands of the London offices of the Dominion and Colonial banks. Moreover, only a few brokers handle these currencies.

The Exchange Dealer's Organisation.—The necessary limitation in the number of dealers in the exchange department has already been mentioned. In some respects this is attributable to the highly responsible nature of the work, but it is also a necessary result of the organisation of the department itself, which would make it

extremely difficult to co-ordinate the work in the dealers' office if the number of operators were much increased.

In its essentials, the exchange dealers' office does not differ considerably from that of the exchange broker. The dealers are usually to be found seated around a table on which are a number of telephone instruments connected with switchboards linking the department by private line with the brokers, important branches of the bank, leading cable companies, a few special customers, and certain banks or financial houses with which the bank is closely associated. Each dealing "position" is also connected to the bank's public telephone switchboard and to the internal switchboard for communications with all other departments of the institution.

The private line switchboard may be of the old Post Office type with the familiar "doll's eye" drop indicators, or the modern so-called "French boards"; i.e., flat tables having several groups of coloured press buttons or studs by which contact can be established with any of the private lines. Each group of buttons comprises a dealing position, controlled usually by one dealer, and each button is accompanied by two small lights, red and green respectively, the former indicating an *incoming* call from the private line concerned and the latter an *outgoing* call. These lights show simultaneously on all the positions, and so indicate to each dealer that the broker or bank or customer is on the wire.

The number of separate positions, and so the number of dealers, depends on the amount of business which the bank is accustomed to transact. In small departments there may be only two or three dealers; in large ones, as many as ten or a dozen, in which case the dealers will ordinarily specialise in different currencies. The senior dealer, for example, will exercise general supervision and be responsible mainly for the most important currency—American dollars; his chief assistant will handle the leading Continental currencies, such as French francs, belgas, and lire; while a third will take charge of the Central and South American group.

Highly important adjuncts of the dealing departments are the various types of calculating machine, the ingenious mechanism of which enables the dealer to convert amounts in one currency into another and to determine equivalent rates and parities with amazing rapidity and extreme accuracy. It can, in fact, be said that this machine has largely supplanted one qualification considered essential in the pre-war exchange operator—that is, the ability to calculate quickly and accurately. At the same time it has minimised the

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risk of loss resulting from an unfortunate error on the part of the dealer.

In order to record his purchases and sales of various currencies, each operator is provided with a dealer's "*book*," ruled with a number of columns and divided into sections for each currency dealt in, or, alternatively, he may utilise what are known as *position sheets*, one for each of the principal currencies in which he is operating. Purchases of a currency are entered in the "Bought" Column of the sheet or book, while sales are entered in the "Sold" Column, and as each operation is effected (or periodically as the case may be, according to the currency concerned) a balance is struck so that the dealer can determine at a glance his "position" in the relative currency, i.e., whether his purchases balance his sales of the particular currency, or whether he has oversold ("gone short") or overbought ("gone long") in that currency. Sometimes separate sheets or separate columns are used for *spot* and *forward* deals, so that the operator has no difficulty in summing up his position in either of these two important divisions of his work.

In addition to the position sheets, the dealer is provided also with lists of all the important foreign exchange centres, against each of which he notes the prevailing rate of exchange as it is advised to him from time to time in the course of the day.

At this point it may be mentioned that although the dealer is linked by private wire with the brokers with whom he transacts most of his business, he is not as a rule in direct communication with any of the other dealers in London. In the same way, although the brokers are directly linked up with quite a number of dealers in the City, they are never connected by private wire with one another.

A Typical Day in the Exchange Department.—The actual procedure of exchange dealing may be best explained by a consideration of the operations of the dealers during a typical business day. On their arrival at the office at about 9.30 a.m. (by which time they will have made themselves conversant with the latest news of the world's economic, financial, and political happenings), the first duty of the operators is to examine all letters and decoded cables from dealers and correspondents in other centres and from local customers.

The communications from local customers will contain orders for spot or forward purchases and sales of various currencies, while the letters and cables from abroad will give the closing rates ruling in the foreign centres on the preceding day, together with orders and

offers to do business in exchange, some of them with definite limits for the transactions and others with instructions to buy or sell at the best rates obtainable.

The first hour or so will be spent by the dealers in "feeling" the market, by ascertaining from the brokers and from Continental friends the opening exchange rates for the day and the general opinion of the "tendency", notes of the quotations being made by each operator on the list of currencies before him.

By about 10 or 10.15 a.m., the Market will have been opened up by offers, through the brokers, to buy or sell currency at indicated rates, and as transactions are effected and quotations are varied from time to time, so the list of rates will be entered up and amended by the dealer. Ultimately, the list is sufficiently complete to permit the dealer to send copies to the various departments for their guidance during the day, though transactions will not be based on these rates without reference being again made to the Exchange Department for confirmation and for the recording of the transaction on the position sheets.

During this time the dealers will receive advice from the Accounts Department of the position of their currency balances in foreign centres and the extent of their forward commitments in each currency, and they will also receive the first notifications from the other departments of the early transactions effected and of important payments and receipts from and to the accounts kept with agents abroad. The dealers take careful details of the various amounts, and having ascertained the balance in each currency, enter such balances on the relative position sheets, after which they are ready to get to grips with the day's operations.

Orders from customers, branches, and correspondents at home and abroad are now continually coming in by letter, telegraph, telephone and cable, and the dealers are unceasingly "plugging in" to the various brokers for rates and entering into the necessary currency deals, while an appreciable number of deals will be transacted by telephone direct with the banks in the chief Continental centres, without the intervention of the brokers.

The chief business of the dealer consists in the purchase of currency (in the form of bills, drafts, and credits with foreign banks) from customers and foreign agents, and in the disposal of the currency balances so created by selling them, at higher prices, to other customers and agents, in the form of drafts and mail or telegraphic transfers issued by his own bank. Generally speaking, operations

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of this kind are of a non-speculative character, for the dealer does not, as a rule, offer to sell exchange to customers or to agents unless he is sure that he can immediately cover such sales by corresponding purchases; while, on the other hand, he does not usually purchase exchange in any form unless he knows that he can at once dispose of his balance at a reasonable profit. Nevertheless, these non-speculative operations afford the astute dealer plenty of opportunities for profit by judiciously covering one form of transaction by another form and one type of deal by another deal of quite different character. When a dealer completes a transaction with a customer, he does not (except in the case of large transactions) necessarily at once cover by an exactly similar operation in the reverse direction. On the contrary, he looks for an opportunity to cover with a view to making as large a margin of profit as possible.

The "market" deals carried out by an exchange dealer are, of course, of great importance, but they are undertaken chiefly with the object of *covering* his transactions with customers and agents. The latter are very numerous and vary considerably in amount and type, whereas the market deals are less numerous, are usually of fairly considerable size, and are usually for T.T.'s.

Other market deals undertaken by the bank dealer are almost always in the nature of agency transactions. Thus, one of his foreign correspondents may request him to "Buy 100,000 francs at 123.50 or best". The banker will probably carry out this deal in the Market at once, and do his best to obtain the francs at a more favourable rate than 123.50 so that he can benefit his correspondent and attract further business.

When a dealer wishes to carry out an exchange transaction, he has only to ring up one or more of the brokers dealing in that particular currency to receive at once a double-barrelled price at which it is certain or practically certain that the broker in question can find respectively sellers and buyers.

Let us assume, for example, that Lloyds Bank has sold one million francs to a customer and that the bank dealer, having had several telephone calls to the Continent and received cables from America showing the price of francs in other centres, still finds that they are offered most cheaply in the London Market. In such circumstances the Lloyds Bank dealer will ask a broker dealing in francs for a price, and, if this appears satisfactory, he will tell the broker that he will take 1,000,000 T.T. Paris.

The broker immediately rings a bank which he knows to be a

seller and asks the dealer there if he will sell him Fcs. 1,000,000 at the price previously mentioned. On the dealer's agreeing, the broker will tell him that this amount is sold to Lloyds Bank, and he will then again ring Lloyds Bank to inform the dealer there that the francs are sold by, say, the Swiss Bank.

Demanding if anything a greater degree of expertness than the operations with customers and on behalf of foreign agents, are the arbitrage and investment deals undertaken by the operator with his foreign agents in such centres as New York, Paris, Amsterdam, Brussels, and Berne, in order to profit from differences in the prevailing rates of interest and of exchange (see Chapters VI and XII).

"Taking a View." In addition to the long-distance arbitrage operations and the deals on account of clients, some exchange dealers (especially those in the foreign banks) undertake market deals with the object of profiting from temporary or *anticipated* movements in the rates. Thus the management of a foreign bank, having carefully reviewed economic and financial conditions generally, may reach the conclusion that a currency will shortly appreciate, so they may decide to "go long" of that currency for a period of two, three, or more months. Accordingly, they instruct their dealer to take steps to increase their holdings of the currency by purchases on the market, with a view to selling out later at a profit. Alternatively, a bank may sell heavily in anticipation of a future fall and opportunities for covering at a lower price.

Clearly, operations of this kind partake of the nature of speculation, and must accordingly be regulated by considerable prudence and foresight. In London, as in other centres, however, there are many experienced financiers who are prompt to take advantage of any likely influence on the market of rumour and sentiment, of social and political complications, and of large purchases or sales made by other operators, at home or abroad.

Only in very exceptional circumstances are operations of this description undertaken by dealers in the English joint stock banks. Every such dealer makes it a practice to avoid taking up a heavy "position" in any currency, even though his anticipations may be based on the soundest considerations, for the object of the big banks is not to enter into speculative operations in foreign exchange but to provide exchange facilities for their customers.

Nevertheless, the speculative and investment transactions undertaken by dealers in London are of the greatest importance, not only as influences responsible for marked movements in the exchange

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rates, but also as factors in the nation's balance of payments and international financial position generally.

Whatever the object of the operation, as soon as any currency is bought or sold, a record is made by the dealer on the relative currency Position Sheet, and full details of the transactions are entered on slips which are passed forward to the dealers' clerical assistants, who record them in the respective books and, in the case of "market" deals, carry out the subsequent routine work of checking the contract notes received from the brokers, confirming with the other party to the bargain, advising the agent abroad to be prepared to pay or to receive the requisite currency, and paying or receiving the sterling equivalent in London on the value date.

The Dealer's Position Sheet.—The dealer's position sheet in any currency is arranged so that he can see at a glance how he stands

Dealer's Currency Position Sheet.

As at Close of Business, 27th March, 19 . . .

	Spot.		Forward.		Final.	Holds.	Specifica- tion of Balances.	Remarks.
	Sold.	Bought.	Sold.	Bought.				
Belgas								
German marks ..								
French francs ..								
Swiss francs ..								
Dutch florins ..								
Danish kroner ..								
Norwegian kroner								
Swedish kronor ..								
Peetas								
Lire								
Canadian dollars ..								
American dollars ..								
Austrian schillings								
Czecho kronen ..								
Drachmas								
Lel								
Finnish marks ..								
Portuguese escudos								
Zloty								
Indian rupees ..								
Colombo rupees ..								
Buenos Aires pesos								

in relation to that currency, and so that he can take steps to cover himself accordingly. This does not mean that bought and sold transactions are covered item by item by deals in the opposite direction. On the contrary, a running position is maintained throughout the day, always on the basis, however, that too large a balance, debit or credit, is not outstanding in any one currency at any particular time. As a general rule the aim of the dealer is to

end the day with a "level" book; in other words, he endeavours so to arrange his purchases and sales that there is no appreciable outstanding balance, debit or credit, against him in respect of any currency or currencies.

When the day's business is completed, the dealer compiles a statement of his general currency position for the guidance of himself and of his colleagues at the opening of business on the following day.

17th June, 19..

French Francs.

	CURRENCY.			STERLING.		
	It. or Sold	Fcs.	c.	Dr. or Cr.	£	s. d.
Spot balances from preceding day		6,784,943	25	Dr.	55,522	17 4
Currency bought during day ..		14,077,874	50	Dr.	113,302	16 3
Currency sold during day ..		13,874,265	95	Cr.	111,889	4 10
Spot balances as under ..	It. or Sold	6,988,551	80	Dr. or Cr.	56,936	8 9
Total bought forward		59,076,243	00	Dr.	475,241	1 11
Total sold forward		66,083,569	00	Cr.	532,502	11 5
Final position overbought or oversold	It. or Sold	18,774	20	Dr. or Cr.	325	0 9
Present sterling value at 124·10					151	5 8
Profit or Loss to date		Profit			£173	15 1
Spot Currency Balances consist of						
On Current Account		1,894,551				80
On Deposit Account		4,000,000				
Undue Bills, etc.		1,094,000				
		6,988,551				80

A specimen of the type of form used for this purpose appears on page 96.

In order to ascertain the position relative to each currency at the close of the day, the balances disclosed by the position sheets are compared with the currency balances extracted from the ledgers and forward currency records, and any discrepancy, caused by items too small to be recorded by the dealers, is adjusted on their position sheets.

These returns extracted from the ledgers are usually somewhat on the lines of the table given above.

The table shows an uncovered position of Fcs. 18,774·20 "short",

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and for practical purposes the book would be considered as "level". The profit is arrived at by ascertaining what it would cost to purchase the necessary francs at the current rate of 124·10, and this gives £151. According to the books there is a total of £325 available, so that the difference of £174 represents the profit to date on transactions in French currency. Unless the amount is considerable the uncovered currency is not actually purchased each day, but is carried forward as the opening figure on the next day's position sheet.

The item "Spot Currency" represents that amount in French francs which has been or is in course of being paid for, whereas the items "Bought forward" and "Sold forward" are the totals of forward contracts outstanding. Profits are taken out of the account periodically—weekly, monthly, or half-yearly, as the case may be—and the figure of £174 represents the profit on French franc deals since the profits were last taken out of the account.

It will be understood that although the profits on non-speculative operations are necessarily limited, they nevertheless amount to a considerable total when the transactions are numerous and a large turnover is involved. Furthermore, it must be remembered that, apart from the balances actually carried in foreign centres, the capital involved is not appreciable, for, unless the dealer deliberately runs an open position, or has to cover heavy forward sales by spot purchases, he sells exchange against exchange which he has bought, and endeavours so to arrange his book that his sales balance his purchases when the day's business is completed.

In these covering operations the dealer does not, of course, have to depend on London alone. With the close intercommunication between the various financial centres by telephone, telegraph, cable, and even wireless, the whole world is now practically one vast foreign exchange market, within which each centre is continually being linked up with every other centre. Hence, a dealer who cannot find cover in the London market can, within a relatively short space of time, and with great ease and rapidity, search practically the whole world for whatever currency he requires. First he may try the Continental dealers and agents with whom he is regularly in touch, and, if they fail him, he may go further afield to North America and elsewhere, deciding ultimately to do business wherever the rates offered to him are most favourable to the operation which he has in hand.

Making a Rate.—In quoting rates to the bank's customers or agents, the dealer must, of course, have regard primarily to the rates

which are being quoted in the market either for buying or selling the currency in question. If he is asked to sell currency, and has no balance to his credit in the foreign centre, he must rely upon obtaining cover in the Market and will accordingly quote a rate to his customer which allows him a profit on the Market's selling price. Likewise, if he is buying currency, he will offer a rate which will afford him a profit after he has resold the currency to the Market at the latter's buying prices. At any particular moment, a dealer could only be *sure* of selling to the Market at the rate offered by market buyers, and of buying from the Market at the rate asked by market sellers. Dealers, for example, may be quoted by the broker at $4.86-4.86\frac{1}{2}$, which means that sellers offer dollars at 4.86, while buyers require $4.86\frac{1}{2}$, the difference between the two prices representing the "market turn" or "market margin". These rates represent the limits at which the dealer can safely rely for cover at any particular moment, though it is quite likely that business *could* be transacted at slightly better rates. In quoting a customer, the dealer will judge by prevailing conditions - i.e., activity or dullness in the particular currency concerned—whether he could entirely rely on the broker's rates during the time within which he has to fix up with his customer; but if for any reason he feels uncertain on the matter, he will naturally quote rates to his customer which will allow for a movement of the Market against him.

Herein lies one of the first criteria of a successful foreign exchange dealer. As in the case of the broker, his success depends largely on his ability to sense the trend of the Market—on his instinct or judgment in weighing up all the complicated factors which from minute to minute determine the course of the exchange rates.

Here we may observe that a first-class exchange dealer, a man of good personality, capable, alert, and far-seeing, may attract an immense amount of business, with profit to himself and to the institution by which he is employed. Dealers at home and abroad with whom he is in daily contact are impressed by his capacity and geniality, and soon the word gets round that the dealer in the bank concerned can be relied upon for the prompt and able conduct of business, and for his judgment and advice in matters pertaining to foreign exchange operations. And, of course, the influence does not stop there; for in the wide range of banking business there are many transactions outside the work of the foreign exchange dealer which may be brought to the bank in consequence of satisfactory and efficient service on the dealer's part.

THE NEW YORK FOREIGN EXCHANGE MARKET.

The organisation and working of the Foreign Exchange Market in New York is in many important respects similar to that of London. There is no local, personal market corresponding to the Bourse which still exists in the Continental centres, but, as is the case in London, there is an elaborate system of telephonic communication between the sixty or so brokers and the foreign exchange dealers who together constitute the personnel of the market.

The New York Market is closely connected by telephone with Chicago, Philadelphia, and other centres, so that most of the exchange business of the States is concentrated in New York. Moreover, much of the Canadian business goes through New York.

The market in New York opens at 9 a.m., which corresponds to about 2 p.m. English time, and explains the afternoon rush on the London Market when the first cables from New York begin to come in giving the rates at which that market opens business. As in London, the bulk of the business in New York is transacted in the latter half of the day, and although the market is timed to close at 5 p.m., operations are frequently carried on long after that hour, particularly in "boom" periods. New York, like London, fixes the rates of exchange for the whole country, and, just as in this country banks and dealers in the important provincial towns are connected directly by telephone with the London Market, so also are the New York brokers and dealers linked by direct private lines to banks and agencies in Boston, Chicago, Philadelphia, and other important centres.

The method of dealing and settling is almost exactly the same as that of the London Market, the vast majority of operations being conducted through the intermediary of specialised brokers, who work on a commission basis, a smaller proportion being effected directly between the exchange dealers. There are, however, one or two special features in the New York Market. In the first place, some of the brokers work, like our stock jobbers, not for a fixed commission, but for a "turn", i.e., they buy and sell on their own account and their profit (or loss as the case may be) consists of the difference between the prices at which they buy and sell. In such circumstances, however, the name of the broker himself does not appear as a party to the bargain, since it is customary for the broker to make an arrangement with his banker whereby the latter, in return for an agreed commission, allows his name to be given by the broker as that of the other party to the bargain.

Another point of difference is that although commercial firms in London rarely if ever transact business directly with the exchange brokers, it is a common occurrence for such firms in New York to deal directly with brokers without the intervention of the banks, buying and selling foreign currencies according to their requirements and, in particular, selling to the brokers sterling long bills drawn against exports of produce to this and other countries.

THE PARIS FOREIGN EXCHANGE MARKET.

The structure of the Foreign Exchange Market in Paris is typical of the markets of the principal Continental centres. While the bulk of operations, as in London and New York, are conducted by telephone between dealers and brokers, the position is complicated by the existence of a local market on the Paris exchange or "Bourse". Thus, although a large proportion of foreign exchange business is transacted at the Bourse during the time it is open from 1.15 p.m. to 3.15 p.m., considerable dealing takes place by telephone between the dealers outside these hours.

Operations are conducted by the foreign exchange dealers either directly or through the intermediary of brokers, the former method being rather more usual on the Continent than in London and New York. Commercial firms ordinarily pass their exchange business through the hands of the banks, but certain important houses deal direct with the brokers specialising in the currencies with which they are intimately concerned. In respect of all transactions which take place on the Bourse, contract notes are passed to an official recorder who occupies a large room in the centre of the exchange. His business is to take a note of the details of each transaction, with the object not only of providing an independent check on the dealings as between the parties thereto, but also of obtaining a record for the purpose of compiling an official list of quotations known as the *Cours Moyen*. After the contract note has been recorded it is officially stamped and passed back to the dealer or broker concerned.

Foreign exchange brokers in Paris do not work on a commission basis in the same way as the brokers in London. Instead, they work for a turn between buying and selling prices which is known as an "*aval*", this difference being paid to the broker by the buyer of the currency.

Conditions arising out of the World War accentuated in striking fashion the peculiar subservience of the Foreign Exchange Market in Paris to that of London. Dealers in the two centres are in the most constant and intimate relationship by telephone and telegraph, and although Paris forms the main link between other Continental centres

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and the outside world, her rates of exchange are based almost entirely on those ruling in the London Exchange Market. Moreover, since London is the world's leading Foreign Exchange Market and acts as a bridge between the Continent and the rest of the world, in particular the United States, it follows as a natural consequence that the majority of operations on the Paris Market are in sterling. Naturally this fact, together with the fact that Paris is closely connected by telephone and telegraph with all important Continental centres, accounts for the expeditious manner in which London dealers are able to conduct their very extensive arbitrage business in Continental currencies.

THE BERLIN FOREIGN EXCHANGE MARKET.

The Market in Berlin works on very similar lines to the Paris Market, the Bourse opening at about the same time. The "official rates" for the various currencies are fixed in much the same way as the French *Cours Moyen*, but they are compiled by official brokers (nominated from amongst the brokers), each of whom is responsible for a single currency or group of currencies. The rates published as official must be rigidly adhered to by banks in executing orders which are given to them for execution at the official rate, but they are allowed to charge a margin of about $\frac{1}{2}$ per cent. on the rate, by way of commission.

In Berlin, the exchange brokers work on a commission basis as they do in London.

THE EXCHANGE MARKETS IN THE FUTURE.

It is hoped that the foregoing brief summary of the organisation of the world's principal Foreign Exchange Markets and of the procedure in a London exchange dealer's office will enable the reader to appreciate the remarkable mechanism which has sprung up in recent years to cope with the vast increase in foreign exchange business. Although, as we have seen, the purchase and sale of bills and the issue of drafts are still important sections of exchange business, the prevailing rates are influenced by a great variety of additional factors. Nevertheless, by reason of its unrivalled adaptability for the postponement of payment and for the transfer of capital, the bill of exchange will no doubt continue to be used by the ordinary trader for his foreign settlements, and, in the future as in the past, the exchange operator will rely for a considerable part of his foreign balances on the proceeds of bills sent overseas for collection.

London, of course, is likely to benefit by any increase in the use of the bill of exchange as an international medium of exchange, for, apart from the fact that London is unrivalled for its discount market and acceptance facilities, there is no reason why the sterling bill should not regain much of its popularity as a means of international settlement.

During the years when sterling has been divorced from gold, the world has had ample opportunity for being impressed by the amazing financial strength of Britain, the immense "following" of sterling, and the almost insuperable difficulties which beset the path of any financial centre which seeks to challenge London's supremacy.

In this respect, the War placed the United States in a most favourable position. In the years before the War, America was a large borrower from Europe, and particularly from this country, while her citizens found ample outlets for the investment of their savings in the ever-developing industries of their own land. Furthermore, the existence in that country of various legal and customary restrictions on banking and discounting operations, and the absence of an organised discount market, considerably limited the extent to which dollar bills were used in international trade.

In consequence of the Great War conditions were entirely changed. Britain's annual trading surplus was largely reduced, her ability to lend abroad was considerably lessened, her American securities were heavily sold, and for several years the pound sterling was badly depreciated. On the other hand, the United States established a large annual trading balance in her own favour, and consequently became a vast creditor of this and of other countries, while her gold reserves were enormously strengthened. The reluctance of the American citizen to invest his savings overseas tended to diminish with his greater realisation of the financial strength of his own country, and with his gradual appreciation of the high return to be obtained on foreign loans.

Thus the great resources of the New York Market attracted to that centre much of the business of long-term-financing (i.e., by long-period loans to foreign States and municipalities) and of short-term financing (i.e., by bills and transfers of bankers' funds) which formerly flowed naturally to London. To promote this result numerous amendments were made in the Federal Reserve Laws and in American banking practice, while the use of the dollar in international trade was carefully encouraged by leading American financiers.

The rupture between sterling and gold in 1931 gave New York, proudly conscious of vast resources of gold, another incentive to take

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the fullest advantage of Britain's difficulties and attract business which had been frightened away by our departure from the gold standard, and, to this end, unremitting efforts were made by American bankers and financiers to improve the facilities of the New York money market.

Happily for us, little real progress in this direction was made. In fact, the United States burnt her fingers badly in her overseas financing, and gradually the world realised that Britain had been forced off gold by circumstances beyond her control, that the manner in which our financial difficulties were surmounted indicated a position of amazing strength, and that our banks had weathered the storm without the faintest suspicion of weakness.

Paris, too, has sought to establish an acceptance business and a bill market and to capture Continental financial business which had previously gone to London. But, despite the enormous strength of the French financial position, no more success has been achieved than in the case of New York. The French, with their very small proportion of world trade, have found that it is one thing to have great wealth and quite another to create facilities for turning that wealth to profitable account as London has done for over a hundred and fifty years. Foreigners generally have unmistakably indicated their preference for sterling and for London settlements, and Paris has had to be content with her old rôle of purveyor of currencies for the London Exchange Market.

This preference—and with it the prestige of sterling—was even more accentuated after the dollar collapse in 1933. And, at the time of writing, conditions are such that we may safely conclude that, given freedom from further war, industrial peace at home, and the cordial co-operation of employer and employed, there is little reason to fear that the pound sterling will be ousted by the dollar from its position as the world's chief medium of exchange.

The international strength of sterling is a tradition; it depends on a world-wide reputation built upon long years of service. The unrivalled discount facilities of the London Market are the product of a wealth of experience and of an accumulation of expert knowledge reaped from years of careful work, and with these facilities those offered in the United States cannot compare. Only very gradually could such an organisation—as remarkable as it is efficient—be acquired by New York or by any other centre, and in the meantime it appears that the traders of the world will continue to use that medium which has proved its worth and which suits them best.

CHAPTER VI

EXCHANGE MAXIMS AND TERMINOLOGY: BUYING AND SELLING EXCHANGE

THE outflow of gold from a gold standard country is regarded with disfavour, especially if it is of such strength as to lower the nation's reserve of that metal beyond what is considered adequate to support its credit system, ensure financial stability, and provide a sufficient margin for contingencies. A strong gold reserve permits a low rate of interest for loanable capital, and, inasmuch as industry is largely conducted on borrowed capital, a low interest rate facilitates trade. For this reason exchange rates which approach or go beyond the *gold export point* are termed *unfavourable*, while those approaching or passing the *import gold point* are termed *favourable*.

In England, most rates are quoted in foreign money per £1, and, when the gold standard functions, the *outgoing* specie points to countries so quoted are *below* the Mint Par, whereas the *incoming* points are *above* the Mint Par. That being so, rates moving downward from the Mint Par are unfavourable to us, not only because, when we are on the gold standard, they are tending to the point when gold may leave us, but also because they mean that our money is falling in value in terms of the money of other countries. Conversely, currency rates moving upward from the Mint Par are favourable to us because they are tending to the point when gold will flow to London and also because they mean that our money is becoming more valuable in terms of other currencies.

When, therefore, a rate is quoted in foreign money per £ (i.e., all currency rates), the maxim to be remembered for all calculations is:—

“High rates are for us, low rates against us.”

And this maxim holds good for any country, provided the rate of exchange is quoted in the same way, i.e., so much foreign currency for each unit of the home currency.

Buyers or Sellers.—Besides being true from the national point

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of view, the above maxim is true from the standpoint of the buyer of foreign currency. A London dealer, for example, who is buying a draft on Paris for Fcs. 100,000 is far better pleased if he obtains 126 francs for every £1 he pays than if he gets only 125 francs for £1, for as against the £800 which he pays in the latter case, he pays only £793 12s. 6d. in the former. The seller looks at the matter from an opposite point of view to the buyer: the fewer francs he gives for each £1, the better for him. If, then, we are buying foreign currency, high rates are favourable, but, if we are selling foreign currency, low rates are the best for us. From this we deduce another most useful and easily remembered maxim, true for all quotations in foreign currency per home unit, i.e., "currency" rates:—

"Buy high, sell low."

This maxim is most useful in interpreting a "two-way", or "double-barrelled" quotation. When a London banker quotes Paris T.T. to a customer as Fcs. 123.55-65, for example, it means that he will *buy* francs at Fcs. 123.65 and *sell* them at Fcs. 123.55. The difference or "*turn*" between the two rates represents the margin from which the banker expects to make his profit. It will be found, therefore, that the rates quoted by a banker to his customer are wider than the market rates, i.e., the rates quoted for market deals, since the banker must allow for his profit on the rates at which he can obtain cover in the Market.

Rates Quoted in English Money. For all *pence* rates, i.e., rates quoted in pence per foreign unit, the foregoing maxims are reversed, as will be clear from an example.

Exchange on Japan is quoted as so many pence per yen, the Mint Par being 24.58d. If the rate is, say, 1s. 11 $\frac{1}{10}$ d., the yen is worth *less* in terms of sterling than the normal ratio, and the rate, though "low", is "favourable" to Britain because less pence have to be given per yen than the Mint Par.

Therefore, when exchange rates are quoted in our own money, i.e., for "pence" rates, we say that

"High rates are against us, and low rates for us,"

and the maxim for buyers and sellers becomes,

"Buy low, sell high."

Clearly, it is better for a buyer to give as few pence as possible, and for a seller to get as many pence as possible for the same foreign unit.

Better Class Bills and Remittances.—Certain types of remittance have recognised advantages over others, and therefore command higher prices than others. For instance, a bill representing money due for payment within a few days is worth more than a bill payable in three months, because, in the latter case, a much longer time must elapse before a purchaser can obtain payment from the drawee or acceptor. If the holder of a long bill wants cash for the bill immediately he must *discount* it with a bank, in which case he will receive less than the face value.

Again, the parties to some bills are world-renowned banks and firms of known stability, and, naturally, a man buying a bill the payment of which is so guaranteed is prepared to pay more for it than he would pay for an ordinary trade bill, the parties to which, being completely unknown to him, offer less security for payment.

A banker who issues a draft bearing his signature expects to be paid not only for the cost of "covering", i.e., providing funds for the due payment of the draft, but also for the expenses incurred by him in drawing the draft and advising the foreign correspondent on whom he draws. In addition, he expects to make a small profit for himself, and an allowance for commission payable to his correspondent.

Invariably, therefore, the price of the banker's drafts will be higher than the current price of ordinary trade bills of the same tenor, while a banker's draft, being first-class paper, can be discounted at a lower rate than a trade bill, which belongs to paper of the second order of merit.

Now a higher price for a bill when the rate is quoted in foreign money per £1, means a lower rate of exchange, and so we get a further maxim:—

"The better the bill, the lower the rate."

For example, suppose a London dealer is offered two bills for Fcs. 10,000, payable in Paris, one a first-class bank draft, and the other an ordinary trade acceptance. He would offer a rate of, say, 124·05 in the former case, and possibly 124·75 in the latter. Clearly, the seller would get more sterling, i.e., a higher price, for his bank draft.

In the latter case the £1 is worth more francs than in the former, and so the inferior (that is the trade) bill is cheaper to buy than the superior bank draft. The bank draft is worth more to the buyer, not only because of its greater security, but also because it can be discounted at a *lower* rate of discount than would be applied to the trade

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bill. If both bills are offered for discount in Paris, less discount will be deducted from the bank draft than from the trade bill.

Rules for Dealing in Foreign Currency.—In applying a rate of exchange to any particular transaction, three questions must be decided:—

1. How is the rate quoted—foreign currency for the home unit or *vice versa* ?
2. Are we buying or selling ?
3. Are we considering the rate from a foreign, or a home standpoint ?

“ Home ” is used to indicate the country in which we are dealing, and if this is France, British currency is foreign, and the British point of view a foreign point of view.

Remember in dealing with rates of exchange that :—

- (a) What is good for the seller is against the buyer of foreign currency, and *vice versa*.
- (b) What is good from the home standpoint is adverse from the foreign.

Consider again the maxims already given:—

When rates are quoted in foreign currency for the home unit, then
(a) Buy high, sell low; (b) The better the bill, the lower the rate;
(c) High rates are for us, low rates against us; (d) High rates are favourable, low rates unfavourable.

Now let us apply these maxims to the following quotations London on Paris, viz., Fcs. 123 per £1, and Fcs. 125 per £1.

- (a) *Buy high.*—It is better to buy 125 francs for each £1 than 123.
Sell low.—It is better to sell 123 francs for each £1 than 125.
- (b) *The better the bill, the lower the rate.*—A bank bill, because it offers better security than a trade bill, will cost more than a trade bill, i.e., fewer francs will be given per £1 in the case of the bank bill.
- (c) *High rates are for us : high rates are favourable.*—It is better for an individual remitter when he can obtain Fcs. 125 per £1 instead of Fcs. 123 per £1, and better for us nationally, since the pound sterling is then more valuable and will buy more francs.

- (d) *Low rates are against us : low rates are unfavourable.*—It is worse for an individual remitter when he can obtain only Fcs. 123 per £1 than when he can obtain Fcs. 125 per £1, and worse for us nationally, since the pound sterling is then less valuable and will buy fewer francs.

Now let us consider the above rates from the French point of view, remembering that *French exchange quotations are in the home currency per foreign unit, e.g., Fcs. per £, and that therefore the maxims are reversed.*

- (a) *Buy low.*—It is better for a Frenchman to give Fcs. 123 per £1 than Fcs. 125.
Sell high.—At Fcs. 125 per £1 he obtains more francs for a bill in sterling than at Fcs. 123 per £1.
- (b) *The better the bill, the higher the rate.*—As a bank bill costs more than a trade bill, the Frenchman will have to give more francs per £1 than he would for a trade bill.
- (c) *Low rates are for us : low rates are favourable.*—To the individual French remitter, because, with the exchange at Fcs. 123 per £1, he can buy each £1 sterling for fewer francs than when the rate stands at Fcs. 125 per £1; and to the nation as a whole, since the franc is then more valuable.
- (d) *High rates are against us : high rates are unfavourable.*—To the individual French remitter, because, with the exchange at Fcs. 125 per £1, each pound sterling costs him more than when the rate stands at Fcs. 123 per £1; and, also from the national point of view, since the franc is then less valuable.

High Price for a Foreign Currency = Low Rate of Exchange.—When an exchange rate is quoted in foreign currency per home unit, a high price for the currency of a centre so quoted means a low rate of exchange on that centre. The converse is also true: a low price for a foreign currency means a high rate of exchange. It follows, therefore, that a rise in the rate of exchange on a centre so quoted indicates a fall in the price of its currency, and a fall in the rate of exchange a rise in the price of its currency. If, for example, the Paris exchange falls from Fcs. 125 per £1 to Fcs. 123 per £1, then an English buyer of francs must pay more sterling for a given number of francs at Fcs. 123 per £1 than at Fcs. 125 per £1. A rise in the rate of exchange on any foreign centre, provided the quotation is in foreign currency per £,

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favours English buyers of the currency of that centre, and a fall favours English sellers of such currency.

✓ **Exchange Terminology : "Rise" and "Fall", etc.**—Much confusion frequently arises in connection with references to the fluctuations in the exchanges, owing to the ambiguous ways of using the words "rise" and "fall", "appreciation" or "depreciation" in regard to the rates or currencies quoted.

The terms "rise" and "fall" are usually applied to *rates of exchange*, in which case they mean exactly what they say. Thus, a rate of exchange which moves from 19 marks per £ to 20 marks per £, or from 1s. 9d. per yen to 1s. 10d., is in each case said to have "risen", though the changes represent exactly opposite movements in the value of sterling. Similarly, a rate is said to have "fallen" when it has moved to a lower figure, irrespective of the manner in which the quotation is expressed.

These are the normal uses of the terms; but some confusion arises from the fact that dealers sometimes speak of a *currency* (not, be it noted, a rate of exchange) as having "risen" or "fallen". In such cases the terms refer to *the value of the currency*; and the direction of the movement in the rate depends upon the manner in which the rate is quoted.

If the Paris rate moves from 124 to 125 (a "rise" in the rate), francs are said to have "fallen" in value, whilst the value of sterling in terms of French francs will have "risen"; while if the quotation on Bombay moves from 18d. to 18½d. (again a "rise" in the rate), the rupee will have "risen" but sterling will have "fallen" in value.

The confused uses of these terms may be necessary to preserve the traditional obscurity of market reports; but for the ordinary person it is best to confine their use to their unambiguous description of movements in *rates of exchange*. To describe movements in the *value* of a currency, the terms "appreciate" and "depreciate" are more lucid to indicate that a currency has become respectively more or less valuable in terms of another currency.

If the Paris rate changes from 125 to 124, francs have become more valuable in terms of sterling, and may therefore be said to have "appreciated". On the other hand, if Japanese yen are quoted at 1s. 3d. instead of 1s. 4d., they have "depreciated", whereas sterling has "appreciated" in terms of yen. (See also Chapter IX.)

Other expressions much favoured by City editors in describing the course of foreign exchange rates are "weak" and "firm", with their

derivatives, "weakness", "firmer", etc. The financial writer who describes the peseta as "weak" intends to convey to his readers that the value of the peseta tends to fall, i.e., that the London exchange rate on Madrid shows a tendency to rise. Dollars, again, may be described as having been "very firm" on the previous day, an expression intended to indicate that buyers of dollars were much in evidence, and that the price of dollars showed a tendency to rise or appreciate, i.e., that the London rate of exchange on New York was inclined to fall or move against London. (See also Chapter IX.)

Premium and Discount.—These terms are applied in foreign exchange for several different purposes, and their precise meaning must be judged from the context in which they appear. They are sometimes used to express the value of one currency relative to another currency *having the same mint value* as, for example, to express the value of the South African or New Zealand or Australian pound—all of which have precisely the same mint value as our sovereign—relative to our own pound. As a rule, the premium or discount is given as so much per cent. Thus the premium on London exchange in South Africa may be given as "3 %", meaning that South African banks are charging £103 South African for £100 sterling payable in London.

The same method may be used to express the position of the exchange rates between *any* two currency units which are of intrinsically equal value, although it is now becoming the general practice to quote all such rates on the basis of a par value of 100. If, for example, Melbourne quotes London at £101 Australian per £100 sterling, the English pound sterling stands at a premium of 1 % in Australia; if at £99, the English pound stands at 1 % discount. See Chapter XXXI for methods of calculating premium and discount.

Another important, but rather more confusing use of the terms, is to express the value of one currency relative to another of *different mint value*. For example, when the Paris-London rate is unfavourable to this country, it is frequently stated that the pound sterling is "*at a discount*" in Paris, or, conversely, that the franc is "*at a premium*" in London. These statements mean, of course, that the pound sterling purchases fewer francs than is represented by the mint par of exchange between the two currencies; or, alternatively, that a greater amount in sterling is needed to purchase a given number of francs than is required at the mint equivalent. In other words, the pound sterling is at a discount in Paris when the rate of exchange is below the mint par, and at a premium in terms of francs when the London-Paris

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rate is above the mint parity of Fcs. 124.2134. The methods of calculating the premium or discount per cent. in such cases are explained in Chapter XXXI.

The third important use of the terms is to express the value of forward currency relative to spot currency, a matter which is explained fully in Chapter XI. French francs for delivery in three months' time may be quoted at "5 c. premium", in which case the forward quotation is *dearer* than the spot price by the amount of 5 centimes per £1, i.e., *less* francs are purchasable per £1 for delivery in three months' time than can be purchased immediately.

Finally, the terms are used in quotations of the forward prices of silver bullion, such prices being given by the market dealers, as explained in Chapter XVI, in terms of a premium or discount on the spot price, i.e., the price for immediate delivery of silver bullion against cash.

It is sometimes said that a premium or discount shows a tendency to "*run off*", which means that the premium or discount is narrowing, or tending to disappear, and that the rates in question are approaching parity.

The Term "Sterling".—Of the term "sterling" it may not be out of place to remark that its connotation has extended from the actual coined sovereign to which it was originally restricted. It is now generally used abroad to denote British standard currency in any exchangeable form in which it appears, e.g., as a bill on London, or as a credit balance in the hands of a London bank. Furthermore, it may be added for the benefit of the reader that a simple statement such as frequently appears in the money article, to the effect that "sterling improved" or "sterling depreciated", has direct reference to the value of the pound sterling in terms of the leading world currencies as indicated by the principal rates of exchange.

"The Pound is worth 13s. 4d."—Since Britain's suspension of the gold standard in 1931 it has become a common practice for the newspapers to include a column showing the value of the pound in foreign centres as being so many shillings and pence. Such a table may appear as follows:—

VALUE OF THE £ YESTERDAY.

Paris	13/6½
Berlin	13/6½
Amsterdam	13/6½
Zurich	13/6½

The meaning is, of course, that the depreciation of sterling in terms of gold currencies is such that the ratio between the current quotation and the Mint Par is the same as the ratio between the sterling figure quoted and twenty shillings.

This method of describing the depreciation of sterling will not appeal to the purist in Foreign Exchange terminology; for by British law the pound can never be worth anything except twenty shillings. Nevertheless, it is a convenient way of stating shortly what could otherwise be expressed only in involved and technical language.

"Parity."—The use of this term in such phrases as "the parity of sterling in New York, Paris, etc.", is another frequent source of confusion. It should be observed that "parity" simply means "equality", so that when sterling, for example, is said to be *at parity* in Paris, or, in any other centre, it simply means that the value of sterling in that centre is the same as its value in London in terms of the foreign currency concerned. If London quotes Paris at Fcs. 124 per £1, while Paris quotes London at the same rate, then the value of the pound in terms of francs (and, of course, of the franc in terms of pounds) is the same in both centres, i.e., the value and the rates of exchange are *at parity*.

The example given is simplified by the fact that the exchange rate is quoted in the same form in both centres, i.e., as so many francs to £1. But between other centres the position is not so simple. For instance, in Paris, dollars are quoted as so many francs per dollar; whereas in New York the franc rate is quoted as so many dollars per 100 francs.

If, therefore, the New York quotation is \$3.89 per 100 francs, the Paris parity quotation would be $\frac{100}{3.89}$ francs per \$1 = 25.71 francs per \$1.

In other contexts, the term "parity" is frequently used to mean that the *indirect* equivalent of one currency in terms of another is the same as the direct rate quoted at the time. A French banker who wishes to buy dollars will ascertain the cost of doing so through London, or Amsterdam, or Berlin, before buying them directly for francs. But it will frequently happen that the *indirect*, or *arbitrated* rate at which he can purchase dollars by, first of all, buying sterling or florins or marks, is exactly the same as the *direct* rate, Paris on New York. In such circumstances, the dealer will describe the rates as being "at parity", and there is no advantage to be gained by operating through another centre. (See Chapters XXIX and XXXI; also *Arbitrated Parity*, page 128.)

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Finally, we may observe that the term is all too frequently used with much ambiguity to mean *mint parity* or *purchasing power parity*, in which case the sense can be judged only from the context.

Methods of Settling Foreign Debts.—Before proceeding to discuss the operations which give rise to the purchase and sale of foreign currency by a foreign exchange dealer, we may briefly review the various methods by which a debt owing in a foreign country may be discharged. From the explanation already given of the function of a bill of exchange, it will be clear that there are two *basic* modes of settling debts by means of a bill:—

- (a) The *Debtor* may be left to buy a bill drawn upon some one in the creditor's country and remit it to the creditor, leaving the latter to present the bill to, and obtain payment from, the drawee; or
- (b) The *Creditor* may himself draw a bill of exchange on his foreign debtor, and sell the bill to a local banker or broker. In due course the bill will be presented to, and paid by, the foreign debtor.

Both transactions have the same effect; but in the one the creditor himself "draws" a bill, whereas in the other the debtor "remits" a bill, or, more usually, a bank draft.

Which of the two basic methods is adopted thus depends on whether the debtor or the creditor takes the initiative, but in practice any one of several different forms of remittance is available to both debtor and creditor.

Remittance by the Debtor.—This may take the form of:—

- (a) *A Banker's Draft in the creditor's currency* purchased by the debtor from his own banker, or drawn by the debtor's banker against a balance on the debtor's Foreign Currency Account (if he has one), and remitted to the creditor.
- (b) *A Banker's Draft in sterling* purchased and remitted in the same way.
- (c) *The Debtor's Own Draft* on his Foreign Currency Account (if he has one), or on his ordinary sterling current account, remitted by him to the creditor.
- (d) *A Cable Transfer* or *T.T.* made by the debtor's banker, whereby payment to the creditor in the foreign centre is

made by the bank's agent on receipt of cable or telegraphic instructions sent by the bank at the instance of the debtor. The debtor would pay his banker the sterling equivalent, or his Foreign Currency Account would be debited, while the creditor would receive payment in his own currency.

- (e) *A Mail Transfer*, whereby payment is made to the creditor by the agent of the debtor's banker on receipt of mailed instructions from the latter forwarded at the instance of the debtor. In this case, also, the sterling equivalent would be paid over by the debtor or the amount in foreign currency would be debited to his Foreign Currency Account.
- (f) *A Trade Bill* purchased by the debtor from a bill broker or foreign exchange dealer - but this is now unlikely so far as London is concerned.

In certain circumstances, international debts may be discharged by the remittance of international securities or interest coupons which are realisable in the country and currency of the creditor; or, as a last resort, gold may be sent. But it must be reiterated that these methods are adopted *only by bankers and financiers, not by ordinary traders*, and that gold shipments, in particular, are undertaken only by bankers or bullion brokers who have the requisite facilities and technical knowledge.

Draft by the Creditor. The creditor may draw, either in sterling or in foreign currency:--

- (a) *On the debtor*, and either sell his bill to a banker, or forward it for collection through his banker with the object of obtaining credit for the proceeds when received.
- (b) *On a bank in the debtor's country* under a credit arranged by the debtor, in which case the bill will also be either (a) sold, or (b) forwarded for collection.
- (c) *On a bank in his own country*, under a credit arranged by the debtor, in which case he can discount the bill or hold it until maturity.

As the vast majority of international settlements are now effected through the intermediary of the banks, the most common type of remittance sent by a debtor is a bank draft, T.T., or mail transfer, whilst a creditor who draws a bill frequently does so under a bank credit.

BUYING AND SELLING EXCHANGE.

In the course of the day's business in the Exchange Department of his bank, the exchange dealer has to apply in practice the various maxims discussed earlier in this chapter. Naturally, the skilful operator makes no conscious reference to such rules, for constant practice and long familiarity with the rates of exchange enable him to decide instantaneously and mechanically whether a rate is favourable to him or otherwise.

In his dealings with the bank's customers and with the Foreign Exchange Market, the operator will be offered and be required to sell rights to foreign currency in a great variety of forms. Apart from the transfer of bullion or securities, money may be sent from one country to another in several ways, and, since the elements of time (involving interest) and security for due payment vary with each form of remittance, different rates of exchange are quoted for each. The bank's cheque or sight draft on a foreign centre is sold at a rate of exchange different from that applied to a bill of exchange payable, say, three months after the date of issue, while other rates are charged for transfers of money by cable or telegraph. For greater convenience and clarity we will consider the rates applied by the operator in (a) the sale of foreign currency and (b) the purchase of foreign currency.

SELLING FOREIGN CURRENCY.

The exchange dealer sells rights to foreign currency in the form of cable transfers, telegraphic transfers, mail transfers, drafts at sight or at fixed periods after date or sight, foreign notes and coin, and letters of credit of various kind.

Cable Transfers and Telegraphic Transfers.—Cable or T.T. rates are quoted by the dealer for transfers by which foreign currency is paid by the bank's agent to a named person abroad on receipt by that agent of instructions, conveyed by cable or telegraph and authenticated by private code. As soon as a cable transfer or T.T. is sold by the dealer, he passes the necessary information through to the special department of the Foreign Branch whose business it is to deal with the despatch, authentication, coding, and confirmation of all cable and telegraphic messages, and the payment is made by the bank's foreign agent within a short time of the receipt of the instructions contained in the cable or telegram. The actual time of the payment depends on what is known as the *value date* (see page 88).

As a rule, all T.T. and cable transfers sold *between market dealers*

are subject to payment on the value date fixed by market rules, and this may be one, two, three, or more days after the day on which the actual deal is effected. In the case of New York, for instance, the value date is two days ahead, so that a dealer who sells T.T. New York on the 1st June will get paid on the 3rd and will cable New York to pay the dollars on the same day. When T.T. are sold *to customers*, however, it is the practice to demand payment in sterling *at once*, and to send off the necessary cable instructions immediately, so that a dealer who sells a customer T.T. New York on 1st June will receive the sterling and instruct his agent to make the payment on that day; i.e., the T.T. would be sold "*value to-day*". If, however, the T.T. is sold on a centre whose time differs from London time, it is likely that the cable would not be received by the foreign agent in time to enable him to make the payment on the same day, so that, if T.T. Prague were sold to a customer on the 1st June, the sterling would be paid in London on that day, but the Cz. crowns would probably not be paid over until the 2nd.

Clearly, telegraphic transfers can be made only between parties who are in close relationship (as, for example, between banks, financial houses and large business firms, and their foreign agents), since the method implies the existence of current accounts between the parties, as well as a prearranged private or semi-private code for authenticating the telegraphed messages. Moreover, as the value of a T.T. depends entirely on the undertaking of the seller to make payment and of the buyer to accept delivery, T.T.'s are made only between houses of market importance with "gilt-edged" names, and not between ordinary business firms.

Since this method of payment involves no risk of loss, little or no loss of interest, and no stamp duties, the T.T. rates between any two currencies, representing the current rate for the purchase of currency which is to be *immediately* available in the foreign centre, may be regarded as the truest reflection of the relative value of the two currencies at any particular moment. The T.T. rate is, therefore, the basic rate of exchange between any two currencies, i.e., it is used by dealers as the basis of their rates for all other types of remittance, and changes in the T.T. rate are immediately reflected in the rates for other forms of remittance unless the changes are balanced by movements in any factors, such as rates of interest, which enter into the composition of the rates for other remittances.

Moreover, a bank which undertakes to sell a T.T. to one of its customers has to pay out the money abroad *at once*, whereas, with

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any other form of remittance, it gains interest on the funds abroad until the remittance is paid. Further, the bank must be covered for its trouble in sending the message and confirming it to its foreign correspondent, so that the rates charged for cables and T.T.'s are dearer than for any other form of remittance.

The actual rate charged in any particular case depends on several considerations. The chief of these are demand and supply as reflected in the rates of exchange, competition of other dealers, ability profitably to cover his foreign agent making the payment, and the importance of his customer. But, in addition to all this, the dealer naturally charges a higher rate per £1 for making a small than for making a large remittance, because the trouble and expense of sending and confirming the cablegram or telegram is the same in either case. As a rule, the cost of the cable or of the telegraphic message is charged separately to the customer, but, if not, the dealer will ordinarily see that he is covered for this item in the rate at which the transfer is sold.

Naturally, large and influential customers who operate frequently receive greater consideration than less important ones, who operate intermittently, and whilst dealers will cut their rates and ignore cable expenses for large or frequent transactions, they charge dearer rates and require payment of the cable costs for transactions of less consequence.

When a cable or telegraphic transfer is made on behalf of a customer, explicit instructions and an indemnity against delay, etc., are taken from him by the bank on a form worded somewhat as follows:—

Order and Indemnity for Cable Transfer.

TO THE NORTHLAND BANK, LTD.,
LOMBARD STREET, E.C.

GENTLEMEN,

We request you to despatch a Telegraphic Message, either literally or in Cypher, direct or through your Agents, to *Ambrose and Son, New York*, based upon the instructions at foot hereof. It is distinctly understood between us that the said message is to be sent entirely at our risk, and that you are not to be held liable for the consequences of any delay, mistake, or omission, which may arise in its transmission, or from its misinterpretation when received, or from errors in identification.

Yours faithfully,

James Brown and Co.

INSTRUCTIONS.

Pay Ambrose and Son, Fifth Avenue, New York, \$100,000, account shipment per Arizona to Brown and Co., London.

Mail Transfers.—Mail Transfer (M.T.) rates are quoted by the dealer for making a payment or transfer by instructions forwarded *by mail* to his agent in a foreign centre. The transfer takes the form of a letter under authorised signatures addressed by the issuing banker to his correspondent, who is instructed to make the payment and to obtain a receipt therefor.

As the mail transfer itself carries the signature of the issuer, there is not the same need, as in the case of T.T., for authentication and confirmation by code; but the mail transfer, like the T.T., presupposes the existence of a current account between the issuer and his paying agent abroad, and there is, of course, no security attaching to the remittance other than the undertaking of the issuer, so that an M.T., like a T.T., would not be acceptable unless issued by a bank or large firm having an "approved name".

When a dealer undertakes to make a mail transfer on behalf of a customer, he takes from the latter explicit instructions, and requires payment from him of the sterling equivalent of the sum to be transferred at the agreed rate of exchange. As a rule, the transfer will be made to the credit of the customer's nominee at a reputable bank, but, if necessary, the sending bank will have the payment in the foreign centre made by its agents by cheque or banker's draft. This applies to T.T. also.

Since the bank issuing a mail transfer has the use of the money paid by its customer for the mailing period which elapses before payment is made by the foreign agent, the bank is compelled by the force of competition to allow its customers interest on the T.T. rate at the rate being paid on bankers' funds, i.e., on "call money", in the foreign centre to which the remittance is made. Hence, the rate charged for a mail transfer, like that for sight drafts or cheques, is usually cheaper than the rate for T.T. by the amount of the allowance for interest for the "mailing period" between the two centres.

The actual amount of the allowance will depend on the time which must elapse between the issue of the transfer and the anticipated date of payment in the foreign centre. This time will, in turn, depend on the distance and on the date of the next outgoing mail from London to the centre concerned. Suppose that a London banker sells a customer a mail transfer on New York for \$250,000, and that, allowing for the next outgoing mail, the transfer is expected to be paid in New York seven days after the date of sale to the customer. The banker may already have the dollars to his credit in New York, or he may cover himself at once by purchasing a T.T. on the London Market, but, in

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either case, he has the use of \$250,000 in New York for about seven days, whereas if he had sold T.T. he would have paid out the dollars the same day as he received the sterling. Hence he is compelled by the force of competition to allow his customer a fair proportion of the interest earned by the dollars standing to his credit, at the current rate being paid in New York on bankers' funds or on short loans.

Guaranteed Mail Transfers (also called **Guaranteed Mail Payments**).—The remittance of money by cheque, or sight draft, or mail transfer involves a slight risk of loss through delay in the mails, which, if it occurs, means an unexpected, and usually unwished for, gain of interest to the seller and a loss of interest to the buyer. Further, it may happen that a debtor has to remit money at a date which, though not so early as to merit the purchase of a T.T., does not admit of the delay incurred by the remittance of funds by M.T.

To meet these difficulties and to avert disappointments and misunderstandings over the time of arrival of mails, it has become the practice in the London Market for dealers to sell *Guaranteed Mail Transfers* (G.M.T.'s), whereby they undertake to effect payment in the foreign centre on a stipulated date (usually the approximate date of arrival of the next outgoing steamer), irrespective of the actual time of arrival and delivery of the mail. The seller ensures that payment in the foreign centre will be made on the agreed date by advising his agent immediately by cable. For example, the mailing period between London and Buenos Aires may be anything from 18 to 30 days, depending on the time of departure of the next boat, but a London dealer may sell a G.M.T. by which the buyer can be certain that payment will be made in Buenos Aires in, say, 24 days from the date of the transaction.

The rates for G.M.T.'s are naturally somewhat dearer than those for ordinary mail transfers, but they are calculated upon the same basis, viz., the T.T. rate, allowance being made for interest for the time to elapse before payment, with the advantage that, as the period before payment is *certain*, the margin for interest off the T.T. rate can be exactly calculated, and so a true price can be fixed which is fair to both buyer and seller. Because of these advantages, G.M.T.'s are frequently used by bankers for transferring their funds for investment to other centres for fixed periods.

It is interesting to note that, owing to the possibility of their being involved in heavy claims for damages, bankers selling G.M.T.'s usually stipulate that, in the event of delay or miscarriage of their instructions, their liability is to be only for interest from the date

when payment should have been effected. Moreover, they avoid, so far as possible, using the term "guarantee" in connection with such deals; i.e., they refuse to be liable for any *special* damages, apart from loss of interest.

Sight Drafts and Cheques.—These comprise drafts or cheques payable at sight or on demand, drawn by the bank on its agents and sold to its customers for despatch to their creditors in foreign centres. The draft or cheque is handed to the customer against payment of the equivalent at the agreed rate of exchange, and the onus of transmitting the draft thus falls upon him, whilst his correspondent is put to the necessity of presenting it for payment to the bank's foreign agent. As the issuing bank has the use of the money during the time the instruments are in transit, the rates quoted, like those for M.T.'s, are slightly cheaper than the rates for T.T.'s. Usually, the rates for cheques and drafts at sight are the same as those quoted for M.T.'s, but the former are, in general, more popular, despite the fact that the latter are more convenient and certainly safer.

The difference between the sight or cheque rate and the T.T. rate on the same centre is frequently referred to as the "*spread*" between them and varies from time to time according to the rate of interest on short-term loans of bankers' funds in the foreign centre and the time of the next outgoing mail to that centre.

As a rule, a nominal charge is made for drafts under a certain minimum value, but above that the banks take their profit in the rate of exchange. Most drafts and cheques are required on the leading foreign centres, such as New York and Paris, and, as each of the leading banks has more than one agent in those centres, drafts are issued alternately on one agent and then on another, i.e., the "*rota*" system is employed, so that each agent may have some share in the business.

If a draft is required on a remote town, the practice is to issue the draft on the bank's agent in the nearest large centre, and to request that agent to advise the issuer if the draft is not presented within a reasonable time of its issue.

Sometimes a bank is asked by a customer to sell him a *sterling* draft drawn on a foreign centre. For this service the bank charges a small commission, and it is usual to enface such a draft with the clause: "*Payable at the Bank's Buying Rate of Exchange for Sight Drafts on London.*"

When a draft of this kind is presented for payment, it is paid by the foreign banker (in accordance with the clause) at his buying rate for sight drafts on London. He reimburses himself by debiting the

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London banker in his sterling account, and, against the credit so created, he can himself draw and sell a draft on the London banker, in which case his profit is the difference between the rate at which he pays the London banker's draft and the rate at which he sells his own draft.

Short Rates.—These are applied to drafts payable within any period up to about ten days. Here again the slight additional allowance made for interest above that involved in sight or demand drafts makes the short rates cheaper than the sight or cheque rates.

Short Sight Rates.—These are sometimes quoted by dealers in New York on Paris, Amsterdam, and Berlin, and relate to drafts payable in those centres eight days after sight. On London, New York quotes a "*Seven-day rate*", in addition to several others.

Letters of Credit.—All important banks in this and other countries now undertake the issue of letters of credit of various kind, whereby their customers are enabled to obtain control of such agreed sums in foreign currency as they may require for business purposes or for pleasure. Thus, a Londoner desirous of spending a month's holiday in Switzerland may arrange with his bank to have a certain sum in Swiss currency placed at his disposal. The currency is handed to him against payment of its sterling equivalent in the form of *Travellers' Cheques* or *Circular Notes*, or he may be given a *Travellers' Letter of Credit* enabling him to draw funds at the Swiss agencies of his own bank.

An operation involving much the same principle arises, for example, when an importer in this country instructs his bank to open a credit in foreign currency in favour of a foreign exporter at a bank in the exporter's own town. The total sum required in the foreign currency is placed at the disposal of the customer against payment of the equivalent in sterling, or against the deposit of satisfactory security, as the bank and customer may agree.

In all such cases the rate of exchange must be fixed by the dealer, and it is his business to see that all transactions of this kind are adequately "covered" by the transfer of funds, if required, to the foreign agent who will be called upon to make the payments. The rates fixed by the dealer for the sale of foreign currency in the form of letters of credit will, of course, be based on prevailing market rates, but they are not cut to such fine margins as rates applied in other cases, and the bank thus secures a slight additional profit from the turn in the exchange.

A large proportion of letters of credit are issued in sterling, and in such cases no exchange operation takes place on this side. The sterling cheque or draft presented by the customer is exchanged (i.e., purchased) by the foreign agent at a rate fixed by him, and the agent reimburses

himself by debiting the sterling account of the issuing banker, to whom he returns the paid draft.

Foreign Notes and Coins.—These items are usually handled in the large banks by a special department known as the "Foreign Money Department", which maintains stocks of notes of the leading foreign countries to meet the requirements of customers, though in London, as in certain other large centres, the items can speedily be obtained from one of the three or four brokers who specialise in the purchase and sale of foreign notes and coin.

The transactions of this department are ordinarily so small that they are not taken into account by the bank dealer, but at times, of course, he has to buy supplies to replenish exhausted stocks, or to sell quantities of foreign notes and coin which are in excess of the Money Department's requirements, as happens, for instance, during the tourist season when foreign visitors bring in large amounts of their money for exchange.

The rates of exchange charged for foreign notes are based on the T.T. rates, but they are necessarily somewhat dearer as the bank has to be recouped for the additional trouble and expense of obtaining such items to meet the customer's requirements, and for insuring, packing, and despatching notes or coin which are in excess of its current requirements. Nowadays, gold coin is usually sold as bullion.

PURCHASES OF FOREIGN CURRENCY.

The dealer's purchases of foreign currency follow much the same lines as his sales, although in all cases his buying price will, of course, be lower than the price at which he holds himself ready to sell the same type of remittance. Long bills, sight drafts, and other similar instruments are quite frequently offered to the dealer by the bank's ordinary customers, and he will from time to time purchase cable transfers, telegraphic transfers, and mail transfers from the market to replenish his own balances abroad. Less frequently, the dealer may arrange a gold shipment to a foreign centre and will have the proceeds credited to his account.

Foreign Drafts and Cheques.—Just as the foreign agents of an English bank purchase sterling drafts, travellers' cheques, etc., issued by banks in this country, so also our banks are called upon to purchase from their customers sight drafts and cheques in foreign money sent by foreign debtors in payment of amounts owing, and also to purchase or encash cheques, etc., in foreign currency presented by foreign visitors to this country; such cheques may be either drawn under letters of credit or issued by the banks' foreign agents to their customers.

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The rate applied by the dealer will, of course, cover the cost of collection of the proceeds, together with any other incidentals, such as stamp duties and postage, and loss of interest. Just as there is a "spread" between the banker's *selling* rates for T.T. and sight drafts, so there is a spread between his *buying* rates for these remittances, but in the latter case the allowance for interest in respect of the sight draft is calculated on the basis of the *overdraft* rate ruling in the foreign centre, since to cover the purchase of such a draft by selling T.T. involves creating an overdraft in the foreign centre during the mailing period.

In general, bank dealers will purchase drafts and cheques on foreign centres only from their customers, and then only "with recourse" against the customer in the event of non-payment. Moreover, the dealer must ensure that any such purchases are within the "limit" or "sanction" imposed by the bank managers on the exchange operations of the customer concerned.

In the case of drafts drawn under travellers' letters of credit, the encashing banker can rarely rely on his right of recourse because of the difficulty of tracing the recipient, so that he must take every precaution to satisfy himself respecting the validity of the letter of credit and the *bona fides* of the holder. Having once undertaken the responsibility of cashing such items, the banker must stand or fall by his action, and if it subsequently turns out that the letter of credit was in wrong hands, and that payment was made against a forgery, the encashing banker will not be able to debit the issuing bank's account or to claim payment from him, and must subsequently bear any loss which arises.

Foreign Coupons and Drawn Bonds.—The increasing internationalisation of securities brings into the hands of the foreign branch a constantly growing quantity of coupons and drawn bonds payable in other currencies. The majority of these items are collected by the banker and the proceeds, less expenses, credited to the customer's sterling or foreign currency account, but quite frequently they are purchased outright by the banker and are collected in due course for his own account. If the latter method is adopted fairly wide rates are applied in order to cover the bank for its trouble in obtaining payment and bringing home the proceeds, involving such costs as listing, packing, postage and insurance (on large parcels), and also for the interest lost during the period of collection.

If coupons or drawn bonds are expressed to be payable at specified rates of exchange in one of several currencies, at the option of the

holder, the dealer will naturally ensure that they are sent for collection and payment to the centre which will give the best return at the actually prevailing rates of exchange.

Long Bills : Negotiation and Collection.—The chief practical points arising in connection with the negotiation and collection of long bills are dealt with in the next chapter.

Stock Drafts and Reverse Stock Drafts.—An instrument with which an exchange banker is sometimes called upon to deal is that known as a *Stock Draft* or *Stock Cheque*. Stock drafts are instruments drawn by a stockbroker in London upon a bank or a stockbroker abroad, in respect of securities purchased on behalf of the latter. They are invariably drawn at sight and have attached to them the certificates or bonds in respect of which they are drawn, these documents being surrendered against payment of the draft.

A banker who is asked to negotiate a stock draft will take care that the current value of the security, which should be of a readily saleable type, is sufficient to cover the amount of the draft; and, unless the drawer is of the highest standing, he will call for a cash margin of about 10 %. When the stock market is in an unsettled condition, it may be advisable to value the security from day to day to ascertain whether an extra margin should be required; though an additional margin cannot, of course, be required in the absence of a special agreement with the drawer.

The draft should not be worded "Against delivery of the attached certificates, pay . . .", as such a clause would affect its validity as a bill of exchange, though the draft may bear a memorandum noting the security to which it relates. The security should be either in bearer form or indorsed in blank, or accompanied by a blank transfer.

As various incidental charges (for packing, postage, and insurance) are incurred in connection with the remittance of the securities, stock drafts are negotiated at rates slightly less favourable to the drawer than those ruling for sight drafts.

Example.—If the cheque rate between London and New York is 3·30, a London banker, on being asked to purchase a stock draft for \$9,732·65, might calculate a rate for stock drafts as follows:—

Cheque rate	..	..	..	..	3·30
Add Insurance, say, $\frac{1}{2}$ ‰	..	..	..	..	·00165
Collecting charges, say, $\frac{1}{2}$ ‰	..	..	..	..	·00082
					3·30247

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The dealer would, therefore, quote a rate of $\$3 \cdot 30\frac{1}{2}$ per £, and would credit his customer with $\text{£} \frac{9,732 \cdot 65}{3 \cdot 3025} = \text{£}2,947 \text{ ls. } 1\text{d.}$

Alternatively, of course, he could adjust the principal amount of the draft by deducting his expenses and charges, and then apply the cheque rate.

A **REVERSE STOCK DRAFT** is a similar document in sterling drawn by a foreign stockbroker in respect of securities sold to a buyer in London; and from the London banker's point of view the purchase of such a draft is equivalent to a sale of currency to the London stockbroker, the rate to include interest for the period of the mail plus insurance and postage on the stock.

If, for example, a London stockbroker (Smith) has purchased from a New York stockbroker (Robinson) 1,000 International Nickels at \$25 per share, Smith can instruct his bankers in London to cable their New York agents, "*Pay Robinson, New York, \$25,000 against delivery 1,000 International Nickels with draft £ . . . on Smith, London, attached, ship insured to us.*"

The banker will work out the rate at which he is willing to buy the draft and will inform the customer of the amount in sterling for which the draft must be drawn. This amount the banker will collect from his customer when the draft arrives.

Example.—The above deal being taken as a basis, what rate of exchange should the London banker quote to Smith, assuming he is a dealer in spot dollars at $3 \cdot 40\frac{1}{2}$ – $3 \cdot 41$, insurance costing 8d. per £100, postage \$5, and the mail period being 10 days? Interest to be allowed at 4 %, New York terms. For what amount should the draft be drawn?

Banker's selling rate for "spot" .. $3 \cdot 405$

Less

Insurance $\frac{1}{2} \%$.. $\cdot 001135$

Postages $\frac{1}{2} \%$.. $\cdot 000681$

Interest $\cdot 003783$ $\cdot 005599$

$3 \cdot 399401$

∴ The banker will quote a rate of, say, $\$3 \cdot 39 \frac{1}{2}$ per £.

∴ The sterling draft should be drawn for $\text{£} \frac{25,000}{3 \cdot 399375}$

$= \text{£}7,354 \text{ ls. } 10\text{d.}$

ARBITRAGE OPERATIONS.

Arbitrage operations are transactions undertaken by exchange dealers with the object of realising profits from differences in the exchange rates ruling at various centres at the same time. The business requires great skill, and, as the dealings must be conducted almost simultaneously, the telephone and the cable are the necessary means of communication.

Suppose, for example, that at a time when the T.T. rate in London on Paris is Fcs. $124 \cdot 10 = \text{£}1$, a London operator is informed by telephone from Paris that the T.T. rate in Paris on London is Fcs. $124 \cdot 12\frac{1}{2} = \text{£}1$. An arrangement may be made whereby the Paris house immediately sells a sterling T.T. to the extent of $\text{£}10,000$, at the rate of Fcs. $124 \cdot 12\frac{1}{2}$, realising Fcs. 1,241,250; at the same time the London operator sells T.T. on Paris to the amount of Fcs. 1,241,000. For this he receives $\text{£}10,000$, wherewith he is enabled to pay the sterling sold by his Paris correspondent. The net result of the transaction is that there remains the sum of Fcs. 250 to the credit of the parties in Paris, and this amount, after deducting expenses, is halved by the two operators, and represents their profit in the operation.

If a number of dealers undertake similar operations the effect will be to depress the value of sterling in Paris, i.e., lower the rate of exchange on London, and to depress the value of francs in London, i.e., send up the rate of exchange on Paris. Hence the rates of $124 \cdot 10$ and $124 \cdot 12\frac{1}{2}$ will be moved in reverse directions until they are approximately equal, i.e., *at parity*, and no profit can be made by further arbitrage.

This is an example of simple or *two-point* arbitrage, but transactions of this kind may be much more complicated, and may involve three or more currencies. If the Paris exchange on London is high, a Paris banker, having sold T.T. on London, and being under the necessity of providing cover, may find that his cheapest way of doing so is to buy Dutch florins in Paris and to use these in Amsterdam to purchase sterling in London. Being nowadays in constant touch with all important centres by telephone, he knows the trend of the market in the various currencies. Hence he buys in the cheapest market and sells where the price is highest.

Furthermore, dealers know by experience that certain centres are specially good markets for particular currencies. The leading position of the London Foreign Exchange Market, with its experience and resources, its geographical advantages and wide range, is sufficient to ensure that the rates quoted by the London dealers are usually

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as good as can be obtained elsewhere. For this reason, no Continental dealer would put through a transaction of any magnitude without first of all "feeling" the London Market. Amsterdam, largely by reason of her intermediary position during the War and partly because of her geographical situation, is an excellent market, so far as London is concerned, for dealings in marks, belgas, French francs, and dollars. In the same way, Berne and Zurich are strong markets for lire and pesetas, while Stockholm is recognised as good for transactions in all Scandinavian currencies.

Hence the Continental dealer who is under the necessity of buying a considerable amount of sterling or dollars first of all establishes telephonic communication with the centres which are usually in a position to offer these currencies at the best rates. In deciding which is the best rate at which to operate, he makes use of one or other of the various types of calculating machines always to be found in the dealers' offices. As soon as a dealer in, say, Paris, hears the rates quoted by Amsterdam and Berne on London, he quickly applies his calculating machine to determine the cost of sterling bought through those centres compared with its cost to him in the Paris Market. Frequently, the sterling will be bought through two or more centres. It is merely a question of buying at the lowest obtainable price, and it does not matter to the dealer, concerned with an important operation, whether that price is obtained by the purchase and sale of one, two, three, or even more currencies, i.e., whether it involves a *two*-, *three*-, or even *four-point* arbitrage operation (see also Chapters X and XXIX).

Cross Rates and Arbitrated Parities.—(The skilled arbitrageur can often make a profit by taking advantage of differences which may exist between what are known as "*cross rates*" and the rates quoted in his own centre.

From the point of view of a London dealer the cross rate between two foreign currencies is the rate at which one of those currencies is quoted in terms of the other. Thus the cross rate between dollars and francs (i.e., between New York and Paris) is *either* the rate for dollars in Paris (i.e., in terms of francs), *or* the rate for francs in New York (i.e., in terms of dollars). For reasons which we have already explained, these two cross rates tend to equality, but when they differ, as often happens, then the arbitrageur has an opportunity to snatch a profit.)

(The "*Arbitrated Parity*" or "*Arbitrated Rate*" between any two currencies is the rate which is calculated by using the quotations for

those currencies in terms of a third currency. Thus the arbitrated parity between francs and dollars can be calculated from their quotations in terms of sterling. If, in London, francs are quoted at 80, and dollars are quoted at 5, then the arbitrated parity between francs and dollars is obviously 16 francs to the dollar, or \$6·25 per 100 francs, each of such arbitrated parities between two currencies being the "*reciprocal parity*" of the other. If at any time the arbitrated parity between two currencies does not tally with the cross rate between them, then arbitrageurs will at once take advantage of the opportunity to snatch a profit, and their operations will tend to remove the disparity.)

Suppose, for instance, that with the above quotations in London, dollars are quoted in Paris at 17 francs to the dollar (taking a wide difference for purposes of illustration). Since the arbitrated parity in London is 16 francs to the dollar, it will be clear that a gross profit of one franc per dollar can be made by the purchase of dollars against francs in London and by selling those dollars in Paris at 17 francs per dollar.

On an outlay of £200 the profit would arise as follows:—

Cost of \$1,000 in London at \$5 per £1	..	..	£200
Sale of \$1,000 in Paris at 17 francs per \$1	..	..	Fcs. 17,000
Sale of Fcs. 17,000 in London at Fcs. 80 per £1	..	..	£212·5

A profit of £12·5 is therefore made, less, of course, the cost of cables.

When the two currencies concerned are both on the gold standard, fluctuations in the "cross rates" are limited to the specie points between the two countries, and, as any wide difference between the cross rates and the arbitrated parities in a third centre will be remedied by arbitrage operations, it follows that the arbitrated parities must also keep within the "cross" specie points.

Thus, the Mint Par between Paris and Berlin, two gold standard centres, is about 607 francs per 100 Rmk. The Paris-Berlin rate cannot move from this Mint Par beyond the cost of sending gold in either direction, and the London rates with the two centres must therefore yield an approximately equivalent arbitrated parity.

For purposes of illustration let us assume that, at a given time, the rates in London are 70 francs to the £, and 10 Rmks. to the £, so that the arbitrated parity is 7 francs per Rmk. Now the Paris-Berlin cross rate will be in the neighbourhood of the mint parity of 6·07 francs per Rmk., so that a person in London requiring marks

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will not pay for them at the rate of 10 marks to the £, because, by buying francs at 70 to the £ and exchanging these in Paris for marks at the rate of about 6·07 francs per mark, he can obtain about 11·3 marks per £1. The purchase of francs in London and the reduced demand for marks would therefore adjust the quotations until the arbitrated rate approached the Paris-Berlin parity of 6·07 francs per Rmk.

The Value of "Cross Rates" to the Dealer.—The importance of these limits to the "cross rates" between gold standard currencies lies in the fact that an exchange dealer can regard a "long position" in one of the gold currencies as being covered by a "short position" in another of the gold currencies. Since he knows that the "cross rate" between them cannot fluctuate far from the specie points, he is provided with a reliable measure with which he can estimate their relative values.

To use the example as before, suppose a dealer has an overbought position of 60,700 francs. He may, if he chooses, sell an equivalent amount of francs for sterling and so level up his books. But it may happen that he already has an oversold position, that is, a "short position", of 10,000 marks. Since he knows that the "cross rate" between francs and marks cannot deviate far from 6·07 francs per mark, he can safely consider the "long position" in francs as covered by his "short position" in marks. In other words, however much sterling may depreciate in terms of gold currencies, the sterling the dealer will require for the purchase of 10,000 marks will be approximately yielded by the sale of 60,700 francs, provided both Paris and Berlin remain on the gold standard. He need not, therefore, sell francs or buy marks in order to level up his books.

If the two countries concerned were not on the gold standard, then a "long position" in one could not be set off by a "short position" in the other. The "cross rates" would be liable to wide fluctuation and each position would need to be levelled up at once in order to avoid risk of loss.*

* At the time of writing, the onerous exchange restrictions ruling in Germany preclude the use of reichsmarks in the manner indicated, for, although the reichsmark is in theory convertible into gold, the market is very restricted, and there is always a danger that the gold standard may be suspended.

CHAPTER VII

NEGOTIATION AND COLLECTION OF LONG BILLS

MUCH of the foreign currency bought by London banks is obtained through the negotiation and collection of long bills of exchange drawn by British exporters in respect of goods sent abroad. Such bills may be drawn either in foreign currency or in sterling, and they may be received by the banker from his customers either for *collection* or for *negotiation*. In both cases the banker ensures that he is fully protected by obtaining his customer's signature to a form of authority, worded somewhat as follows, in which the customer agrees to indemnify the bank in the event of non-payment of the bills concerned.

Customer's General Form of Authority for Collection or Negotiation of Foreign Bills.

TO THE NORTHLAND BANK, LTD.,

LOMBARD STREET, E.C.

Date.....

GENTLEMEN,

We may have occasion from time to time to hand you for collection or negotiation (Cheques, Drafts, or Bills of Exchange (with or without documents attached) and we hereby agree to your forwarding the same to your agents for the time being for collection or negotiation.

In addition to your ordinary rights as holders of such Cheques, Drafts, or Bills of Exchange, you are authorised to accept in payment thereof a banker's cheque or bankers' cheques on London, and in the event of such cheque or cheques not being paid on presentation to debit the amount to our account with all charges incurred thereon.

It is understood that these transactions are in all respects at our entire risk and responsibility.

Yours faithfully,

James Brown and Co.,

17, Eastcheap, E.C.

Long Rates of Exchange.—At one time the exchange tables published in London regularly quoted *long rates of exchange* on the principal foreign centres for the sale or negotiation of bills having 30 days and upwards to run before they reached maturity.

Nowadays, very few long rates are published in London, since London banks are rarely asked to sell long bills to their customers;

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the only long rates regularly quoted in the exchange tables are the 90-day rates for certain South American centres (Lima and Valparaiso), and the long rates on South Africa, Australia, and New Zealand. Hence, it is now the practice to negotiate long bills at *tel quel* rates calculated by making the necessary adjustment for interest, etc., on the prevailing T.T. rates.

At the same time, London banks will always supply a long rate if they are asked to do so, and it is, therefore, still necessary for the dealer to be able to calculate a long rate from the sight or T.T. rate quickly and accurately. We may observe, too, that New York always quotes on London at 60 days' sight as well as for cable and cheque, for the reason that considerable quantities of 60-day bills on London are drawn and negotiated in the United States. (See Tables in Chapter IX.)

The long rate is obtained from the T.T. rate by making allowances for interest, stamp duty, and risk in the manner explained in Chapter XXVII. Naturally, the element of credit is of considerable importance in the case of long bills, since the holder must rely on the parties to the instrument for ultimate payment during the time the bill has to run before reaching maturity. For this reason, a three months' bill drawn or accepted by a bank or first-class financial house commands a better price than an ordinary trade or commercial bill of the same tenor. Moreover, a bank bill is discountable at a finer (i.e., lower) rate of discount, and thus gives the holder a higher present value than a trade bill, which is discountable only at a higher rate.

Regularity of Foreign Bills.—Before negotiating or collecting a foreign bill a banker must examine it carefully to ensure that it is apparently in order, otherwise he may be unable to obtain payment, or at least he may suffer considerable delay.

In particular, it should be remembered that the bill must conform not only with the laws of this country, but also with those of the *country on which it is drawn*. The stamp duty payable in this country should already have been paid, and the bill should therefore bear the necessary impressed stamps. The foreign stamp duty will not, of course, be paid until the bill reaches the other country.

In certain cases, e.g., bills on the South American republics, it is desirable that the bill should be drawn in the language (e.g., Spanish or Portuguese) of the country on which it is drawn. Moreover, where it is customary for the bill to be drawn in a set this rule should be followed; bills on South America should always be in triplicate. Again, between some countries there is a customary usance, which should

as a general rule be adhered to, though in most cases there is now considerable variation in the usance. Thus, bills on Australia or New Zealand have a usance of anything up to 120 d/s, though 60 d/s is most usual. On South Africa, the usance varies from demand to 120 d/s, though 90 d/s is now most common. Bills on the Argentine, Brazil, Uruguay, Chile, Peru, and Bolivia are usually at 90 d/s, whereas those on Mexico, Ecuador, Nicaragua, Salvador, and Venezuela are generally at 60 d/s.

In the case of bills drawn in sterling it is important to see that a suitable exchange clause is included where that is customary (see below).

Finally, the banker should be careful to ascertain with certainty whether the bill is D/A or D/P, or whether any restrictions are to be placed on the release of the documents. The latter must, of course, be strictly in order and in conformity with the law of the relative country.

Collection of Foreign Bills.—In the case of bills received for *collection*, the banker acts merely as an agent of his customer, and it is extremely important, therefore, that he should take explicit instructions from the customer as to how each bill and its proceeds are to be dealt with, together with a clear undertaking from him to be responsible for foreign stamp duties and for the collecting charges of the bank itself and its foreign agent, unless these are recoverable from the drawee. Special care is required if the bill has documents attached, and, in such a case, the banker would require to be instructed on the following matters:—

1. Is the drawee or his agent to be asked to pay collection charges? If so, what action is to be taken if payment of these charges is refused?
2. Is the "fate" of the bill, after presentment for acceptance and/or payment, to be advised by cable or by mail?
3. Are the documents accompanying the bill to be handed to the drawee, or his agent, against acceptance or against payment?
4. If the bill is dishonoured by non-acceptance or non-payment, is it to be protested, and, if so, does the customer agree to be liable for the cost?
5. Is there a case of need? If so, has he any authority to dispose of the relative goods?
6. Is the foreign buyer to be allowed to take samples of the goods before giving his acceptance or before paying the bill?

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7. If the goods are rejected, are they to be stored and insured at the customer's expense?
8. How are the proceeds of the bill to be dealt with?

Inward Collections.—As in collecting foreign bills, so in making inward collections, the banker must keep a close watch for irregularities, if he is to avoid delay. The following are points which he must watch with particular care:—

(a) *Indorsements in foreign characters.*—London bankers will not pay bills so indorsed without a notarially attested transcription or a London banker's confirmation of the indorsement. Hence a banker receiving for collection bills so indorsed should obtain the consent of his foreign agent to any expense incidental to this procedure.

(b) *Unclassed bills in foreign currency.*—Such bills are payable at the ruling rate for sight drafts on the day they fall due.

(c) *Indorsements confirmed by foreign bankers.*—English bankers will not usually accept such confirmations of irregular or illegible indorsements, so the London collecting banker should add his own confirmation in all such cases.

(d) *Indorsements invalid according to English law.*—The general rule is that action can be brought upon a bill in this country only if the indorsement is valid according to the law of the country in which it was made: it is immaterial in such a case whether the indorsement is or is not valid according to English law. The bill must, however, bear an indorsement purporting to be made by, or on behalf of, the payee or indorsee. Thus, in the case of *Koechlin & Cie v. Kestenbaum Bros.*, 1927, it was held that the mere personal signature of an agent on the back of a bill payable to his principal, although widely recognised on the Continent, does not constitute an indorsement according to English law.

(e) *Bills drawn in a foreign language.*—These are usually paid without question, but the drawee is entitled to demand a notarially attested translation of the bill.

Guarantees in Respect of Documentary Bills.—Occasionally, bills received from an agent for collection or for presentment for acceptance have attached to them documents which are incomplete, but which are accompanied also by a covering letter which includes a note to the effect that:—

“This Bank has received a full set of shipping documents, the remaining copies of which will be forwarded by next mail.”

If in such circumstances the correspondent is one who can be relied upon, the bank would be satisfied that the documents were in safe hands, and if, on presentation of the bill, acceptance (or payment) were refused on the ground that a full set of documents or an indemnity were required, the bank would naturally give this indemnity.

In practice, this so frequently happens that a system has grown up whereby the banks and accepting houses exchange *general letters of guarantee* in the following form:—

To *The Blank Bank, Ltd.,*
London.

.....19....

In consideration of your accepting/paying bills presented to you by us from time to time, bearing the indorsement of any of the banks listed overleaf, we hereby undertake to hold you indemnified against any loss or damage you may sustain by reason of the fact that the bills are not accompanied by a FULL set of shipping documents.

Yours faithfully,
The Northern Bank, Ltd.

On the reverse of this letter is typed a list of banks abroad from whom the bank or accepting house is in the habit of receiving documentary bills, and who have signified their agreement to account to their London agent for all the documents in a set.

Having satisfied himself on these matters, the banker sends the bill to his agent abroad with a request that he will present it to the foreign drawee for acceptance, and at maturity, for payment, and that he will either arrange for the return remittance of the proceeds, or credit them in the local currency concerned to the London bank's *nostro* account. When advice of payment of the bill is received by the London bank, the proceeds, *less* the bank's charges for collection, are placed at the customer's disposal.

If the bill is drawn in *sterling*, it will as a rule be paid by the foreign drawee in his own currency at a rate of exchange agreed upon between him and the collecting agent (see "Exchange Clauses", below), but the proceeds will come back to this country as sterling and will be credited to the customer *less* charges. If the amount of the bill is in *foreign currency*, that amount will, of course, be paid over. In this case, however, the London bank will usually arrange to purchase the foreign currency proceeds from its customer on receipt of advice from his agent, crediting the sterling equivalent to the customer's account. The rate applied will be that for spot currency, i.e., T.T., since the currency is already in the bank's name.

In certain cases, the proceeds of foreign bills handed to a banker for

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collection are credited by him to his customer's Foreign Currency Account, and if, thereafter, the customer wishes at any time to exchange part of his foreign balance for sterling, the conversion is effected at the bank's *current* buying rate for the currency in question.

As a general rule, exporters in this country prefer to negotiate (i.e., sell) their foreign bills rather than to hand them to the bank for collection, since the former method enables them to obtain immediate command over the proceeds instead of having to wait until maturity of the relative instruments. Bills are usually sent for collection only when they are drawn direct on a foreign importer (that is, not on a bank abroad) and thus afford the London bank insufficient security to induce him to negotiate them. In passing, it may be pointed out that this disinclination on the part of bankers to negotiate bills drawn on ordinary traders is one of the main reasons for the vogue of the bank draft and bank credit, since the security offered by the name of a well-known bank renders the bill much more readily convertible into cash by sale or discount.

Negotiation of Foreign Bills Drawn in Sterling.--Bills drawn in sterling by drawers in this country on foreign importers are very frequently offered to bankers for negotiation, i.e., sale or discount. Such bills will not, of course, be accepted for negotiation unless the bank is satisfied as to the standing of his customer, and as to the standing of the parties to the bill, or is otherwise secured in case of non-payment.

The drawer cannot, of course, draw his bill in sterling unless he has quoted his price in sterling; and, as it is becoming more and more the practice to quote prices in the importer's currency, the drawing of bills in sterling by exporters in this country is becoming less common.

Exchange Clauses.--Where a bill is drawn by the exporter in sterling, it is clear that any risk of loss through exchange fluctuation must be borne by the importer, and the question arises as to the rate of exchange at which he will pay. Frequently, this matter is settled by the wording of the bill itself, since it is nowadays usual to include in foreign bills drawn in sterling what is known as an *Exchange Clause*, i.e., a clause prescribing the method of determining the rate of exchange at which the bill is to be paid.

"Exchange as per Endorsement."--One of the best known exchange clauses applied to bills drawn in sterling on foreign places is that which requires payment to be made by the foreign drawee at a rate of exchange endorsed on the bill (see Example 7, Chapter II). The

endorsement is made by the banker who negotiates the bill and takes the following form:—

“ Pay X.Y.* or order, at the rate of for £1 sterling.”

The banker also converts the sterling amount into currency at the indicated rate, and writes the amount as converted on the face of the bill, the currency amount so inserted thereafter taking the place of the amount in sterling. By thus empowering a London banker to fix the rate of exchange, the English drawer when he sells his bill obtains cash for the full sterling amount of his invoice; he is spared the trouble of quoting prices in foreign currencies, and shifts the speculative part of the bargain on to the foreign buyer. He is freed from all trouble in connection with obtaining payment of the bill and from all risk of exchange fluctuation. Moreover, he receives more by this method than he would obtain by drawing an unclausured bill and forwarding it for collection or by discounting it with a banker; for, in the first case, he would have to bear collection charges, and, in the second case, he would be charged discount. By drawing the bill with the “ Exchange as per endorsement ” clause he receives the *full sterling face amount at once*, for the banker recoups himself for loss of interest by an adjustment of the rate he endorses on the bill.

In spite of its advantages to the British trader, the clause “ Exchange as per endorsement ” has in recent years fallen into disfavour, and it may be said that, as a general rule, the clause is not now applied except by special arrangement with the drawee. The chief reason for this is that, when exchange rates have fluctuated considerably, foreign drawees have refused to pay at the endorsed rates, particularly when the exchange rate has moved in their favour between the time of endorsement and the date of maturity. Moreover, foreign drawees often object to the application of this clause on the ground that the rate endorsed by the negotiating banker is fixed at such a level as to charge the drawee for *interest on the face value for the period that must elapse before maturity*. This is because the negotiating banker, who pays the exporter in sterling the full face amount of the bill, adjusts the rate for conversion into foreign currency to include interest on his money until the bill falls due. In other words, the banker applies to the bill a *tel quel* rate in which he makes due allowance for interest to cover the period during which he will be out of his money.

Owing to these difficulties, banks nowadays frequently inform the

* The banker's agent or correspondent in the foreign centre.

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customer of the rate to be applied to the bill, and request him to insert this himself in *his own* indorsement, while, in nearly all cases, the drawer is requested to inform the drawee of the rate endorsed.

Naturally, the negotiating banker will himself run the risk of loss from fluctuations in the exchange unless he takes steps to cover himself. Hence, he will treat the transaction like any other purchase of foreign currency, i.e., the currency acquired will be used by him as cover for his sales of remittances in the same currency, and the banker's profit will consist of the margin between the rate at which he buys and that at which he sells.

It should be noted that the clause described is not used on bills drawn on India and the Far East, or on South American countries, for each of which there is a more or less recognised clause (or clauses). "Exchange as per endorsement" is, however, often seen on bills drawn on the British Colonies and Dominions, the reason for the continued use of the clause in these cases being that the colonial rates are usually fixed by agreement by a "ring" of banks, and, whether the drawee likes it or not, he has no alternative but to pay at the exchange rates which are so fixed.

Other Exchange Clauses on Sterling Bills. At the present time the greater proportion of bills drawn from this country in sterling bear one of the following clauses:—

"Payable at $\left\{ \begin{array}{l} \text{banker's} \\ \text{the X.Y. Bank's} \end{array} \right\} \text{selling} \left\{ \begin{array}{l} \text{drawing} \end{array} \right\} \text{rate for} \left\{ \begin{array}{l} \text{sight bills} \\ \text{demand drafts} \end{array} \right\}$
on London on date of payment."

"Payable at banker's selling rate for $\left\{ \begin{array}{l} \text{Telegraphic Transfers} \\ \text{90 days' sight drafts} \end{array} \right\}$ on
London on date of payment."

"Payable with approved banker's cheque on London for full face value."

"Payable without loss in exchange."

The effect of the first and second of these clauses is that the foreign drawee must provide in his centre sufficient of his own currency to purchase the requisite remittance on London for the face value of the bill, at a rate of exchange fixed by the collecting banker.

It should be observed that the clauses provide for payment of the bills at the presenting bank's "drawing rate" (i.e., its *selling* rate)

and not its "buying rate", for the reason that the former rate is less favourable to the foreign drawee than the latter.

The clause providing for payment by 90 days'-sight draft is largely used in bills drawn on South America, such bills being often negotiated at a special rate known as a "*Flat Rate of Negotiation*" (see Chapter XXVII).

As a rule, sterling bills on the Argentine, Uruguay, Ecuador, Colombia, Salvador, Venezuela, Nicaragua, and on the Central American countries are payable by sight drafts, and it is desirable that they should be claused to that effect. Sterling bills on Brazil, Chile, Peru and Bolivia are usually paid by 90 d/s draft on London, and should not include a clause calling for payment by *sight* draft unless the drawer has made an arrangement to that effect with the drawee. Another point in connection with South American bills is that they should not be made payable "plus Bank Charges". If the drawer is to recoup himself for such charges they should be included in the amount of the bill.

The third and fourth clauses give the drawee the option of purchasing the required sterling from any other local bank which will quote him a better rate than is offered him by the collecting banker. Hence, the drawee is not bound down by the wording of the clause to a rate fixed by the collecting banker: he is free to make his own bargain for the return remittance, and he may, of course, prepare for the settlement beforehand by a forward purchase of sight exchange on London in the way explained in Chapter XXI. If he decides to purchase the sterling from another bank, however, he must be able to satisfy the collecting banker that the remittance he offers is sound, i.e., he must proffer an *approved* banker's cheque.

Whichever of the clauses is used, the collecting banker will enforce the bill with the rate fixed by him and will claim the amount of local currency as converted at this rate. If the bill bears either of the first two clauses, the banker will collect the amount claimed and will be in a position to remit to his correspondent the full sterling amount of the bill (in the form of sight draft, T.T., or 90 d/s draft, according to the clause employed) less the cost of stamps. He will not usually deduct a collecting charge as he obtains his profit in the rate fixed by him—he has sold sterling at the rate fixed on the bill.

But if the bill bears either the third or the fourth clause, the drawee will be entitled to ignore altogether the amount claimed by the collecting banker and can hand him in full settlement a sterling sight draft for the face amount drawn by a reputable local banker. If the

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drawee does this, the collecting banker will be deprived of his profit on the sale of sterling and will therefore recoup himself for expenses by deducting from the sterling proceeds not only the stamp duties, but also a collecting charge. Moreover, in fixing his rate on such a bill, the collecting banker will obviously have to bear in mind the competitive rates quoted by local bankers, and he will not be able to claim such a profitable rate as he would on a bill bearing the first or second of the clauses above. For this reason he will charge a collecting commission to his correspondent whether the drawee accepts his rate or not.

The main difference between the clauses from the viewpoint of the original holder or negotiating banker in this country is this: that where the first or second clause is used, the holder or banker will receive a sterling remittance for the full face value of the bill (less, of course, the stamp duty on both outward and home remittances); whereas, under the third or fourth clause, the holder or banker will receive the sterling face value less the collecting charge and stamp duties. Hence, bills falling in the former class will fetch a slightly higher price in this country than bills of the latter class.

If it is desired to avoid payment of collecting charges, the clause should indicate that the charges are to be covered by the payment made by the drawee. The following are some examples of such clauses which are in actual use:—

AUSTRALIAN BILLS FOR COLLECTION.

" Payable at the current rate of exchange for demand drafts on London plus stamp duty."

" Payable at current rate of exchange for a demand draft on London, together with all bankers' charges for collection."

Where either of these clauses is used, the collecting bank in Australia fixes the rate at which the bill is to be paid by the drawee, and, in doing so, the bank places on the drawee's shoulders the cost of stamp duty in the first case, and of collection charges in the second case.

Hence, where the first clause is used, the rate fixed by the collecting banker will be based on his *selling* rate for a draft on London *plus* an allowance for the stamp duty on both the bill and the return draft. The customer will be credited with the sterling amount of the bill (*less* collecting commission) at the date of the return mail.

Where the second clause is used, the banker in this country will indicate on the bill the amount of his collecting charge, while the

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collecting banker in Australia will add his charges and fix his rate so as to cover all collecting charges. The drawee must either accept the rate quoted or provide a sterling remittance for the full amount, inclusive of charges. In either case the customer in England receives the full sterling amount, without deduction, at the date of the return mail.

AUSTRALIAN BILLS FOR NEGOTIATION.

" Payable with exchange and stamps for negotiating bills on the Colonies as per endorsement."

This clause is normally used only on bills which are to be *negotiated* in this country—as distinct from being sent for collection. Bills bearing this clause are treated in the same manner as bills bearing the usual " Exchange as per endorsement " clause, and the negotiating banker will usually allow for his commission in the rate at which he endorses, but will *add* the stamp duty payable in Australia. The figure obtained by converting the amount of the bill at the endorsed rate, *plus* the local stamp duty, is written on the face of the bill in place of the amount as drawn, and, in due course, this amount will be collected by the negotiating bank's Australian branch (usually free of any collecting commission) and the full amount, *less* the local stamp duty, will be credited to the London office under advice. The negotiating customer will, of course, receive at once *the full sterling amount* of the bill.

BILLS ON NEW ZEALAND AND SOUTH AFRICA.

Bills on *New Zealand* usually bear one or other of the clauses used on Australian bills.

South African bills usually bear the " Exchange as per endorsement " clause if they are to be negotiated in London, but if they are to be sent forward for collection, the clause used is generally " Payable at collecting bank's drawing rate for sight drafts on London ". An interest clause, similar to that used on Eastern bills, is sometimes inserted in bills drawn in the United States on South Africa.

INDIAN AND EASTERN BILLS.

" Payable at the A.B. Bank's drawing rate for demand drafts on London, together with interest at . . . per cent. per annum from date hereof until approximate date of arrival of remittance in London."

This clause, now almost universal in bills on the East, is known

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as the "*Eastern Clause*", and any sterling bill bearing it will be sent forward for collection through one of the Eastern banks (they will not *negotiate* such bills). The banker fills in the rate of interest (at the current rate for advances in the Eastern centre) and remits the bill to his agent or branch in the centre on which the bill is drawn. The latter fixes the rate for conversion (its drawing rate), and claims from the drawee the amount in local currency representing the equivalent at this rate of the sterling amount *plus* the interest payable. When the bill is paid, the agent credits the London banker with the proceeds, and the latter credits his customer with the sterling amount *less* collecting charges.

It should be noted that, although the customer is entitled to be credited with the sterling as from the date of the bill (by reason of the interest clause), it is customary for the banker to allow him to draw only a certain percentage of this amount (say 75 %), treating the sum drawn as an advance. Then, when advice of payment is received, he will allow the customer to draw the remaining sum *plus* interest. This procedure, involving the issue of a Marginal Deposit Receipt, is explained more fully on page 146.

The rate of interest specified in the interest clause on Eastern bills will be that fixed by the Association of Eastern Exchange Banks. This rate is designed to cover *both the interest and the charges incurred in the place of payment* (e.g., collecting commission and stamp duty), and is, of course, varied from time to time. Once the rate is inserted in the clause, however, it becomes part of the bill and cannot be altered during the term of the instrument. If, on the other hand, the rate of interest changes during the term of the bill, and the bill, at maturity, is not paid but is renewed, then the new interest rate will be inserted for the new period.

Sometimes there is added to the interest clause the phrase "*plus all collection charges*", in which case the banker in this country will add the amount of his charges, and require his Eastern agent (after adding *his own* charges) to collect the whole amount, *plus* interest, from the drawee. In this case the drawer of the bill (i.e., the exporter on this side) receives the full sterling amount without deduction of collecting charges.

Clearly, an exporter cannot place the burden of interest on his importer except where the terms of their contract allow him to do so. Where goods have been sold on *c.i.f.* terms (i.e., where the price quoted covers the cost of the goods, together with *insurance and freight*) the seller is entitled (by the custom of the Eastern trade) to claim interest

at the prevailing rate on the total amount of his invoice, and he accordingly enfaces his bills with the interest clause. If such a bill provides for the delivery of documents *against payment*, and the drawee tenders payment before maturity, he will automatically receive from the collecting banker an allowance for the unexpired period of the bill in the form of a smaller charge for interest.

Under a *c.i.f.c.i.* contract, however, the price charged for the goods sold will cover *banking commission* and *interest*, as well as cost, insurance, and freight, so that the exporter's bill will *not* include an interest clause. If in such circumstances, therefore, the bill is drawn D/P and the drawee tenders payment before maturity, some other provision must be made for him to obtain an allowance for interest. Hence, it is usual for D/P bills drawn under *c.i.f.c.i.* contracts to carry at the foot what is known as a *Rebate Clause*, which is generally worded thus:—

" If payment is made before maturity, allow rebate at . . . per cent. per annum, plus 18 days if paid by T.T."

In this clause again the rate of interest inserted will be that of the Eastern Exchange Banks, while the clause provides that, if the bill is paid by T.T. (instead of by cheque, as is usual), the drawee shall be allowed an additional rebate in the form of interest for 18 extra days, i.e., the approximate mailing period.

Another variant of the interest clause is as follows:—

" Payable at drawee's option at the A.B. Bank's drawing rate for demand drafts on London or at their telegraphic transfer rate on London, with interest at . . . per cent. . . . etc."

The effect of this clause is the same as that of the preceding one, for what the drawee who pays at the T.T. rate gains in a reduction of interest he loses in a less favourable rate for the T.T. as compared with a sight draft.

Another clause sometimes used on Eastern bills is:—

" Payable at the A.B. Bank's current rate for demand drafts on London together with all collecting charges."

This has practically the same effect as the similar clause used on Australian bills.

Originally, bills on the East were often drawn " Exchange as per

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endorsement," but this is seldom done nowadays, the "Eastern Clause" being used in almost all such cases, as also on bills on British East Africa, Kenya and Tanganyika.

Before leaving the subject of exchange clauses it may be pointed out that none of the clauses here described should be inserted on a bill *drawn in this country in foreign currency*. The exchange clauses are used on bills drawn in England only if they are expressed in *sterling*. Furthermore, the drawer of a bill should not insert an exchange clause without first obtaining the consent of the drawee.

Unclassed Bills Drawn in Sterling.—Bills are sometimes drawn in *sterling* on foreign centres without the inclusion of an exchange clause, but even then it is unusual for such bills to be paid in *sterling*. As a rule, a bill so drawn is paid at a rate of exchange which is customary in the foreign centre or in the particular trade out of which the bill arises. For example, bills on Brazil usually contain the clause "Payable at the presenting bank's drawing rate for 90 days' sight drafts on London on date of payment", so that a bill on Brazil which was unclassified would nevertheless be negotiated and paid as if this clause had been included.

If no such customary clause exists, the bill will be paid, according to general usage, at the foreign collecting banker's *selling* rate of exchange for sight drafts on London on the date of maturity.

Usually, the collecting banker will "claim" an amount representing the face value converted at such a rate as he considers fair. The drawee may then either pay the amount requested or dispute the rate fixed. Alternatively, the drawee may tender a bank sight draft on London for the *sterling* amount of the bill. In either case, of course, the risk of loss through exchange fluctuation falls on the drawee, and the negotiating banker will receive from the collecting agent the *sterling* amount in the due course of mail.

In fixing his price for negotiating such a bill, therefore, the banker will deduct an allowance for stamp duty and discount for a period which, in the case of a draft payable at a period after sight, will include: (a) the time of the outward mail; (b) the time which the bill has to run, i.e., the period from the date of "sighting" by the acceptor until the date of maturity; and (c) the time of the homeward mail.

Negotiation of Long Bills Drawn in Foreign Currency.—It is now the practice of London bankers who are asked to negotiate a long bill drawn in foreign currency either to credit the *sterling* equivalent

directly to the sterling current account of the holder, or to give in exchange a banker's sight draft or cheque for the sterling value of the bill.

In calculating his rate for negotiating such a bill, the banker must pay special regard to (a) the standing of the various parties to the bill, and (b) the condition of the currency in which the bill is drawn. A bill drawn on or accepted by a first-class bank abroad would obviously be a more attractive proposition than one drawn on a foreign merchant, and would command a higher price, since it could be re-discounted in the foreign centre at a better rate. Similarly, a bill drawn on a country whose currency is unstable, or where there are restrictions on exchange dealings, would be more difficult to re-discount than one drawn on a country with a stable currency and a strong banking organisation.

In calculating the amount with which he will credit his customer, the banker must take into consideration:—

- (a) The basic rate, or rate for purchasing *demand* drafts or T.T. on the centre on which the bill is drawn.
- (b) The rate at which the bill can be re-discounted on its arrival in the foreign centre.
- (c) The period which the bill has to run before maturity, allowing for the time taken in mailing the bill (if it is payable so many days or months *after sight*) and for days of grace, if any.
- (d) Any stamp duties to which the bill is liable in the foreign centre.
- (e) Any charges for collection which the foreign banks may make.
- (f) An appropriate allowance for possible delays of mails or other contingencies.
- (g) His profit.

In calculating the period which the bill has to run, the banker can ignore the outward mailing period if he is basing his rate on the current rate for *demand* drafts, for this rate already allows for the interest lost whilst the draft is in transit. On the other hand, if the banker is taking the T.T. rate as the basis of his calculations, he must allow for the mailing period, since the T.T. rate is the price of currency deliverable *immediately* in the foreign centre.

No deduction will, of course, be made for British stamps, since the bill, having been drawn in this country, will be on paper bearing an impressed stamp, and, in the rare circumstances when such a bill has been drawn abroad, the customer must stamp it before transferring it to the banker.

Utilisation of Proceeds.—When a banker purchases a currency bill from a customer, two courses are generally open to him for securing the return of his expenditure of sterling. If he elects to forward the bill to his correspondent banker in the centre on which it is drawn, for discount on arrival and credit to his currency account, he is in a position to sell: (a) a T.T. or cable transfer and incur an overdraft until the arrival of the bill; or (b) a demand draft whose presentation abroad will approximately coincide with the credit for the discounted bill; or (c) forward exchange for delivery to coincide approximately with the credit for the discounted bill.

In cases (a) and (b) the banker recovers his sterling at once. In case (c) he has to wait for the duration of the outward mail. Which course he will adopt depends upon his exchange position, on the demands of his customers, on the ruling interest rates, and on the comparative merits of the rates of exchange available for the three classes of remittance.

There is another course available should the banker not wish to re-discount a bill he has purchased. He may send it to his correspondent abroad for acceptance, etc., and have it held abroad in portfolio, or returned to him until the due date approaches. Instead of selling T.T., cheque, or a "short" forward against his purchase, he may sell forward exchange for delivery on a date coinciding with the due date of the bill.

In the latter case, the banker turns the transaction into an *investment deal with the exchange secured*, i.e., he can calculate exactly what return he will receive on the sterling he has invested. Examples of this type of transaction are to be found in Chapter XXX.

Marginal Deposit Receipts.—Where foreign bills in sterling or in currency are drawn direct by an exporter on an importer abroad, it occasionally happens that the standing of the parties is not regarded as sufficiently good to enable the banker to negotiate the bills for their full value. As a result, it is the practice of banks to advance a specified percentage of the value of each draft and to retain a margin of about 25 % as security. The amount so retained is placed to the credit of the drawer on Marginal Deposit Account, and a Marginal Deposit Receipt is issued in favour of the customer. Interest is allowed at the same rate as was charged by the banker for negotiating the bill (so that the customer does not suffer an additional loss of interest). Where the bill includes an interest clause, the rate inserted in the bill is made applicable to the margin on deposit.

As a rule, the receipt thus issued to the customer specifies that the

funds are retained by the bank against *all* maturing bills, thus giving the bank the right to hold the funds until all matured bills have been paid and the proceeds received by the bank, and also to apply the deposit to meet *any* bill or bills which may be dishonoured. Of course, no bank would insist on the retention of a heavy deposit held in respect of several bills of a good customer if part of the bills had been met. Usually, in such circumstances, part of the deposit will be released; but everything depends on the standing of the customer, and what the bank will readily do in one case it may not do in another.

CHAPTER VIII

THE STRUCTURE AND WORK OF THE FOREIGN BRANCH

As a general rule, the exchange dealer's office forms part of the *Foreign Branch* or *Foreign Department* of the institution concerned, and as the extent of the dealer's transactions in any currency is ultimately dependent on the operations of the other sections of this larger organisation, it is necessary to have some acquaintance with the work of the latter before one can appreciate fully the importance of the dealer and the object of his operations. It is therefore proposed to consider briefly the arrangement and work of the various departments of the Foreign Branch of a large English bank.

It must be clearly understood that the Foreign Branch referred to here is that section of a large bank which is responsible for the conduct of its foreign operations in *London*, and it must not be confused with a foreign branch situated abroad. Except in the case of Lloyds Bank, which has branches in India, the big English banks have no branches abroad, although they are usually represented in other countries by affiliated but entirely distinct companies, as, for example, Barclays Bank (Dominions, Colonial and Overseas), Ltd., which has a head office in London distinct from the London Foreign Branch of Barclays Bank, Ltd.

Unless it works in collaboration with an affiliated institution of this kind, the Foreign Branch conducts its overseas operations through agents or correspondents in other centres, and usually reciprocates by acting for those correspondents as their London agent. The London Foreign Branches of the English banks do not, however, undertake such reciprocal arrangements with banks in the Dominions and Colonies which have their own London offices, since it is customary to pass all *outward* Dominion and Colonial business through the London offices of the banks in those countries.

In this connection, it is interesting to notice that many foreign banks which have their own branches in London (and occasionally in one or more of the large provincial towns) have nevertheless agents

among the London bankers with whom they transact *direct* business from abroad, the London banks reciprocating by keeping accounts with the foreign banks in overseas towns.

The London Foreign Branches or Foreign Departments of the banks are largely in the nature of clearing houses for foreign dealings and business of all kinds. Every day they receive orders and remittances in almost endless variety from their branches all over the country and also from their agents and correspondents abroad, and within the branch specialised sections or departments are in operation to deal with the various articles and orders. The actual arrangements vary considerably in different institutions, but generally speaking the more important sections deal with the following classes of business, each of which is briefly discussed in the succeeding paragraphs :—

- (1) Foreign Bills for Collection and Negotiation.
- (2) Drafts, Mail and Cable Transfers Issued.
- (3) Inward Collections and Credits.
- (4) Foreign Credits Outward.
- (5) Foreign Cashier.
- (6) Foreign Coupons and Securities.
- (7) Dealers and Exchange Contracts.
- (8) Cables and Correspondence.
- (9) Accounts.

The business of the Foreign Branch is kept quite separate from the ordinary banking business of the bank, since this business is clearly of a special character. The Foreign Branch *operates as a distinct concern*, regarding all parties with whom it has dealings as customers, whether such parties are bankers abroad, other banks in London, private persons in London and abroad, or offices of its own bank. The only difference made in the case of dealings with other offices of the same bank is that, while such offices deal with the Foreign Branch direct, all *settlements* are effected through the head office. Moreover, each department of the Foreign Branch is kept quite separate from the others, and each department treats the others as customers for all book-keeping purposes.

The one Foreign Branch usually transacts the majority of the foreign business of the bank, though occasionally some of the larger branches have their own direct connections with foreign correspondents. In other cases, branches may buy their requirement of foreign currency from the Foreign Branch and re-sell it to their own customers.

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The Accounts Department.—This section of the Foreign Branch may be regarded as the key to its operations, for all transactions of the various sections must of necessity pass through the accounts and records in some form or other.

All the bank's foreign exchange transactions with its numerous customers, whether at the head office or at any of its many branches, all its dealer's operations with the market, and all its foreign exchange transactions with the bank's agents and correspondents abroad, are recorded, checked, and summarised in this important department. Its daily work, therefore, covers an extremely wide field, yet it must be so completed that the bank's position in any foreign currency can be quickly and easily ascertained, and so that the dealer, in particular, can be given a correct view of his operations in each currency with as little delay as possible.

The accounts themselves fall into two main divisions: (a) *Sterling Accounts*, and (b) *Currency Accounts* which, if maintained with foreign banks abroad, are called "*Nostro*" Accounts.

Sterling Accounts. These include: (i) The sterling accounts recording amounts received by the bank for sterling letters of credit, travellers' cheques, and similar documents issued in favour of people abroad, and also for sterling drafts and mail transfers, the sterling remaining on these accounts until the paying agent in the foreign centre reimburses himself by drawing upon the foreign branch; (ii) The sterling accounts maintained with the institution by its foreign agents and correspondents, out of which it pays sterling drafts issued abroad by its correspondents, and any transfers which they instruct the bank to make. There is little difference between the actual form and working of an account of this kind and an ordinary domestic current account, except that the former is provided with a column for the "value" date, to which reference has already been made.

"Vostro" Accounts.—All such sterling accounts maintained on behalf of foreign agents and correspondents are distinguished by the Foreign Branch as "*vostro*" (i.e., "your") accounts, a term which is also applied by the agents to the accounts in *foreign currency* maintained with them by the London bank. Thus the dollar account of Lloyds Bank in New York would be described by the New York agent in any communications with Lloyds Bank as the latter's *vostro* account, while the sterling account of the New York agent with Lloyds Bank, London, would be referred to by the latter as the former's *vostro* account. In effect, a *vostro* account is identical with any other account kept in the home currency, and interest is charged or allowed

thereon, according to the state of the balance, at the prevailing market rates.

" Nostro " Accounts.—The accounts in *foreign currency* kept by a bank with its agents abroad are referred to by the Foreign Branch as *nostro accounts*. Readers with some knowledge of languages will have no difficulty in understanding that the term *Nostro Account* is interpreted to mean "*Our account with you.*" Thus Lloyds Bank, London, will have a *nostro* account kept in francs with its agent in Paris, and a dollar *nostro* account with its agent in New York.

A *nostro* account in a foreign centre is operated in exactly the same way as are current accounts with banks in this country, except, of course, that all transactions thereon are in the foreign currency. To the *credit* of the account pass all purchases of the foreign currency made by the exchange dealer and remitted by him to his foreign agent (e.g., coin and notes, drafts, and mail or cable transfers), and also the proceeds of bills and coupons sent for collection and of securities sent for realisation in the foreign centre concerned. It is also credited with any payments in foreign currency made by the London bank on behalf of the foreign agent. On the other hand, the balance of the *nostro* account is *debited* with any sales of the currency concerned in the form of cheques, mail and telegraphic or cable transfers on the foreign agent sold by the London bank, and with payments made by the foreign agent on behalf of the London bank against bills or drafts drawn under clean or documentary letters of credit.

Clearly an account of this kind with a fluctuating balance may be in credit, or it may become overdrawn, and accordingly interest is calculated by the agent on the daily balance in exactly the same way as is done in the case of a current account with an English bank. Furthermore, each account of this kind has a "value" column to indicate exactly when interest will begin to run in respect of each item, as circumstances often arise in which the value date differs from the date of the entry. Frequently, too, a commission on the turnover will be charged by the agent for his trouble in making payments and in collecting the proceeds of bills, coupons, and securities, although sometimes the agent's commission is separately charged with each item as in the specimen account on page 154. In the case of currencies subject to frequent fluctuation and a limited forward market it is naturally to the advantage of the exchange dealer to keep his balances on the *nostro* accounts to a minimum, but in those cases where rates are reasonably steady and commitments are easily covered by forward deals, he will be influenced in his decision to

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maintain a large credit balance or an appreciable overdraft in any centre by the relation between rates of interest in that centre and rates of interest in this country.

As a general rule, the balances carried by important banks with their agents in the principal centres are necessarily considerable, for they must be ready at all times to meet the demand of their customers for remittances to those centres. Such holdings do, in fact, constitute part of the liquid assets of the banks concerned (appearing in their balance sheets at the calculated sterling equivalents), and it is therefore understandable that they endeavour to utilise such balances to the full extent by turning them over as rapidly and remuneratively as possible, while at the same time they seek to obtain as high an interest rate as possible on the amount which may be outstanding.

Reciprocity plays such a large part in modern international banking that all important London banks maintain foreign currency accounts with the principal foreign banks with whose sterling accounts they are entrusted. Hence, it is quite usual for a large London bank to keep a dozen or more current accounts running with banks in one large centre, e.g., New York or Paris, as well as minor accounts in all the principal cities of the world. As the foreign banks work on the same principle, the problem of maintaining a show of activity on all these accounts is a difficult one, and the total sum locked up in maintaining even small credit balances with some hundreds of banks all over the world is considerable.

It is usually the task of one man (backed by up-to-date statistics from the Accounts Department of the bank's position with each of its foreign agents) to watch the activity of each correspondent's account, so that the *nostro* and *vostro* accounts shall reflect reciprocal working. And at times when remunerative business in bills and credits is relatively small, transactions must be "spread" as much as possible; e.g., credits are opened with different banks in turn, collections are despatched first to one bank and then to another, drafts for each day's work are drawn on different banks, and so on.

It is obvious, then, that, by keeping on friendly terms with his foreign correspondents, the dealer in London can do much to attract business to his bank. Hence it behoves him to execute the commissions entrusted to him by foreign correspondents on the best possible terms. If the foreigner finds that the dealer in one London bank can be relied on to quote him a slightly more favourable rate for exchange operations than that quoted by other dealers, it is obvious where the business

will be sent, and with it will go a large proportion of the foreign bank's other transactions.

On page 156 is a specimen *nostro* account of a London bank as it would appear in the books of its agent in New York.

The "Nostro" Ledgers of the Foreign Branch.—It is necessary for the Foreign Branch of a bank, whether in London or abroad, to maintain exact counterparts in its own ledgers of the foreign *nostro* accounts, for it must have first-hand information of the state of its balances in other centres. Such counterpart accounts are, in fact, double accounts, for all entries therein are made not only in the foreign currency concerned, but also in the home currency, the equivalents being worked out at the rates at which the transactions are effected, while balances are converted at the rate of the day. Thus a London bank will record its own accounts with foreign agents in its *nostro* ledgers, entries in which are made from day to day in accordance with mail, telegraphic and cable advices from the foreign agents, and in accordance with instructions to pay or to receive currency sent to the foreign agents by the various sections of the Foreign Branch.

In some banks, the *nostro* account for each foreign agent or correspondent is kept in two sections, described respectively as "Nostro No. 1" and "Nostro No. 2". In the first are recorded the funds of the *Foreign Branch itself* with its agents abroad, while in the second are recorded particulars of the foreign currency held abroad *on behalf of the bank's customers*. Other banks keep a combined *nostro* account, in which the money held on behalf of customers is merged with that belonging to the bank.

But while the entries in the *nostro* accounts at home and abroad will usually be identical as to rate of exchange and amount, they will, of course, fall on the reverse sides of the ledger, in just the same way as a customer's passbook is the counterpart of his account with a bank, although the entries are on opposite sides. In other words, a *debit* in the *nostro* account maintained by the Foreign Branch of a London bank will appear as a *credit* in the *vostro* account of that bank in the foreign centre. For example, if a London dealer buys 100,000 French francs, he will pass the amount to the debit of the *nostro* account with the Paris agent in the London *nostro* ledgers, and in due course the Paris agent will *credit* the *vostro* account of the London institution to the same extent. If the London Foreign Branch remits bills to its foreign agent for collection and credit, the relative *nostro* account in the Foreign Branch ledgers is *debited* with

Specimen Ruling of a "Vostro" Account¹

THE LONDON BANK, LTD.,

in account with

THE FIRST AMERICAN BANK, NEW YORK

Date.	Particulars.	Value Date.	Dr.		Cr.		Balances.		Days.	Interest and Commission Columns (as required).
			Dr.	Cr.	Dr.	Cr.	Dr.	Cr.		
19.. 1	Balance b.d. †	19..	\$	c.	\$	c.				
June 3	Natl. Bk. A/C Lloyds	June 3			105,000		105,000		2	
" "	T.T., Morgan & Co.	" 3	75,000		50,000		155,000		7	
" 10	B.C., Arnoux & Co.	" 10			200,000		80,000		3	
" 13	M.F., United Bank	" 13	110,000				280,000		2	
" 15	Payment under L.C. 1171	" 15	65,000				170,000		2	
" 17	Coupons U.A.R. collected	" 17			1,720		105,000		1	
" 18	Commission thereon	" 18	54				106,666		2	
" 20	Payment by Wilson Bros.	" 20			8,000		114,666		1	
" "	\$10,000 U.R. Bonds realised less expenses	" 20			9,750		124,416		2	
" "	Comm. thereon	" "	245				124,171			

¹ This account appears in the books of the First American Bank, New York, and, as viewed by that bank, it is a *vostro* account. If the London bank were referring to this account, it would speak of it as "Our *Vostro* Account with the First American Bank."

[†] The balance does not necessarily agree with the balance shown by the corresponding account in the London *vostro* ledgers. As a rule, dates are not shown in this column unless they differ from the date of entry. (See pages 156-7.)

the proceeds on advice (since the amount is *owed* by the agent), whereas the agent, of course, gives the London bank *credit* in its Foreign Currency Account on collection.

Similarly, if the London bank sells its customer a draft in the foreign currency drawn on its foreign agent, the relative *nostro* ledger account is *credited*, whereas the agent abroad *debts* the London bank with the amount paid out against the draft. In general, items *which are received* by the foreign correspondent on behalf of the London bank are *debited* to the *nostro* account in the London ledgers, whereas items *which are paid out* by the foreign agent are *credited*. Corresponding but reverse entries will be made by the foreign agent in the London bank's Foreign Currency Account, designated a *rostro* account by the agent.

In addition to this, however, other important differences arise between the entries in the two accounts by reason of the time which must elapse between the dates of despatch and dates of receipt of such items as mail transfers, advices of collections of bills and coupons, and advices of payment of bills. Consequently, entries may be made in the *nostro* account in one centre days and even weeks before the corresponding entry is made in the account on the other side. Thus a London banker may issue a dollar mail transfer on his New York agent to-day and will at once credit the *nostro* account with the amount, but the actual payment may not be made until one week hence or longer. Again, the London banker may forward to his New York agent a parcel of American bills for collection. On receipt of the proceeds the agent will at once credit the London banker's *rostro* account with the dollars, but the corresponding entry in the *nostro* ledgers of the London Foreign Branch will not be made until advice of the collection has been received, usually by post several days later.

Sometimes, it may be noted, the foreign correspondent will be credited with collections even before they have actually been made. For instance, if a Metropolitan cheque is received for collection on his behalf on January 27th, the *rostro* account may be credited *at once*, "value January 28th," whilst a Country cheque may be credited immediately, "value January 29th." In each case the value date is fixed according to the date when the proceeds should be *received*: in these circumstances the sums are said to be credited with "forward values". On the other hand, where a remittance is received for collection on some out-of-the-way place, say the Isle of Man, and it is not known exactly when credit will be received, the *rostro* account will not be credited until the bank has received advice of the credit from its collecting agent. Thus, if such a cheque is received on

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January 27th, and on February 1st the bank is advised by its agent that the cheque has been collected, value January 30th, the *vostro* account will then be credited (on February 1st), "value January 30th". This is known as a "back value".

As the value dates of certain items cannot, therefore, be accurately inserted in the remitter's books, it is not usual to include columns for interest and charges in the *nostro* accounts. The practice is to have all statements from abroad carefully checked when they are received, and to calculate interest after the *items* have been reconciled with the entries in the *nostro* accounts.

Reconciling Home and Foreign Entries.—In view of the considerations mentioned above, it is not surprising that a high degree of importance is attached to the prompt despatch and receipt of advices of payment and credits affecting *nostro* accounts, particularly as the actual entries have sometimes to be adjusted by allowances for expenses incurred. In fact, no entry in a *nostro* account is regarded as final until a duly signed debit or credit advice has been received and carefully checked.

Where the currency funds of the Branch itself and of its customers are separately recorded in "Nostro No. 1" and "Nostro No. 2", it is usual to keep separate accounts with the foreign agent, so as to facilitate the reconciliation of the balances thereon with the Foreign Currency Accounts abroad. The balance on the Nostro No. 1 Account corresponds approximately to the exchange position in the currency con-

Specimen Ruling of an THE FIRST AMERICAN BANK, LTD., in

Date.	Particulars.	Value Date.	Currency.			
			Dr.		Cr.	
19..		19..	\$	c.	\$	c.
June 1	Balance b/d.	June 3	121,500			
	T.T., Lloyds	" 3	50,000			
	T.T., Morgan & Co.	" 10			75,000	
" 8	M.T., United Bank	" 13			110,000	
" 18	B/C., Armour & Co.	" 10	200,000			
" 19	Payment by Wilson Bros.	" 18	8,000			
" 20	Payment under L/C 1171.	" 15			65,000	
" 22	M.T. National Bank	" 27			24,300	
	Proceeds U.A.R. Coupons	" 17	1,720			
	Comm. thereon	" 17			54	
" 25	Proceeds realisation U.R. Bonds, less expenses	" 20	9,750			
	Comm. thereon	" 20			245	

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cerned as shown by the dealer's position sheets, and these are kept in such a manner as to facilitate agreement with the *nostro* accounts. But the Nostro No. 2 Account is affected only when purchases or sales are made *on account of customers*. Thus, if a customer wishes to have a draft payable in New York issued against his dollar account, that account is debited and Nostro No. 2 Account credited. On presentation of the draft in New York the Foreign Branch's No. 2 Dollar Account is debited in the books of the New York correspondent, thus reconciling that account and the Nostro No. 2 Account.

Arrangements therefore exist for the periodical agreement of the entries in the accounts from time to time. In practice, this is accomplished by the despatch from agent to principal of *statements of account*, which are sent quarterly, monthly, weekly, or even daily in the case of accounts of frequent operation and first-rate importance. Such statements enable a reconciliation to be effected between the home and foreign *nostro* accounts, for each statement gives full details of all entries since the date of the last return. A specimen of such a statement would be very similar in appearance to the specimen of the *vostro* account on page 154. In fact, if the posting is machine done, the statement will be an actual carbon copy of the ledger account, while in other cases it may be a photographic reproduction of the ledger pages. The entries are carefully ticked with the account in the *nostro* ledger, and in due course a Reconciliation Account is drawn up very much on the same lines as the Reconciliation

Account in a "Nostro" Ledger

account with THE LONDON BANK, LTD.

Balance Currency.			Rate.	Value Date.	Sterling						Dr. or Cr.	Balance Sterling.			
					Dr.			Cr.							
	£	c		19..	£	s.	d.		£	s.	d.		£	s.	d.
Dr.	121,500			June 1	25,000	0	0					Dr.	25,000	0	0
Dr.	171,500		4-87	" 3	10,266	18	10					Dr.	35,266	18	10
Dr.	96,500		4-87	" 3				13,400	8	3		Dr.	19,866	10	7
Cr.	13,500		4-85	" 13				22,680	8	3		Cr.	2,713	17	8
Dr.	186,500		4-85	" 10	41,237	2	3					Dr.	38,523	4	7
Dr.	194,500		4-86	" 18	1,646	1	10					Dr.	40,169	6	5
Dr.	129,500		4-86	" 15				13,374	9	8		Dr.	26,794	16	9
Dr.	105,200		4-85	" 27				5,010	6	2		Dr.	21,784	10	7
Dr.	106,920		4-85	" 17	354	12	0					Dr.	22,139	3	4
Dr.	106,860		4-85	" 17				11	2	8		Dr.	22,128	0	8
Dr.	116,616		4-86	" 20	2,006	3	5					Dr.	24,134	4	1
Dr.	116,371		4-86	" 20				50	8	3		Dr.	24,083	15	10

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Statement or Account periodically drafted in every business house in order to agree the balance shown by the firm's bank passbook with that of the bank account in its own ledgers.

It remains to be added that any queries as to the nature or amount of any of the entries are taken up immediately with the correspondent so as to minimise any loss or difficulty which may result from delay.

Forward Purchases and Sales of Foreign Currency.—Forward transactions (see Chapter XI) do not affect the *nostro* account until they mature. But, pending their maturity, some record must be kept of the amount in currency which is outstanding in the form either of a forward purchase or of a forward sale. For this purpose special impersonal accounts, sometimes known as "Term Accounts", are kept, one for each currency.

A forward purchase of, say, francs will be entered to the debit of the Term Account for francs or the Forward French Francs Account, whilst a forward sale is entered to the credit of that account. When the forward purchase matures, the bank has the francs paid direct to the foreign agent, or remits them to him; in either case, the *nostro* account relating to the agent will be debited and the existing debit in the Term Account cleared. Similarly, when the forward sale matures, the francs are delivered by drawing on the agent or issuing a mail or cable transfer on him; the *nostro* account is then credited and the Term Account debited.

If, however, forward transactions are covered by spot purchases or sales, the latter will, of course, appear in the relative *Nostro* "Spot" Accounts. Thus, if the dealer sells \$100,000 forward, 3 months, and buys spot to cover, the New York *Nostro* Account will be debited in respect of the spot purchase, but the credit to that account in respect of the forward dollars will not be passed until the dollars are delivered to the forward buyer by the bank's agent in New York at the expiration of the 3 months.

It will be clear that any balance appearing on the *debit* side of the *nostro* account in the books of the Foreign Branch will represent a *credit* balance in the books of the foreign agent in favour of the *London* bank, i.e., it will represent the funds held by the agent on behalf of the *London* bank. In general, as the exchange dealers of our leading banks seldom run an uncovered position, any credit balance on the *nostro* accounts which does *not* belong to the bank's customers will represent cover for drafts or M.T.'s in transit, credits not yet utilised, actual forward sales, and so on.

In any event, the agent will allow interest on this credit balance at the prevailing local rate, and it is this local rate which decides the London banker as to the size of the credit balance it will pay him to maintain. Conversely, if rates for temporary accommodation are low in any given centre, it may pay the banker to allow his accounts there to become overdrawn; e.g., he may cover forward purchases or purchases of undue bills by sales of spot currency.

Nostro Control Accounts.—The system of maintaining separate Nostro No. 1 and Nostro No. 2 Accounts is not used by all banks; indeed, it is probably true to say that no two banks adopt precisely the same system of foreign exchange accounting.

Because of certain practical difficulties which arise from the use of *nostro* accounts which include both currency and sterling columns, some banks have a system wherein the transactions with each foreign agent are entered in a Nostro Currency Account for that particular agent, this account recording the amounts in foreign currency *only* and having no sterling columns, whilst *every* transaction in that currency with *any* of the bank's agents (including purchases and sales on behalf of customers who keep currency accounts) is passed through a *Nostro Control Account* for that currency, with sterling columns for extending the equivalents.

The advantage of this system is that the accounts of individual agents are not burdened with detail in sterling which really does not affect their position (so that it is much easier to reconcile them with the statements received from abroad), while the whole of the transactions in each currency are brought into a centralised account wherein the "net" position, either in currency or sterling, can be easily and quickly ascertained from time to time, and from which it is easy to calculate the profits on operations in the currency concerned.

• **Currency Accounts of Customers.**—Apart from the currency and sterling accounts of the bank and its agents, are the currency accounts which are opened by the Foreign Branch for its English customers. As a general rule, the currency balances so maintained represent provision made by the customers for future payments which they have to make abroad, as, for example, for imports of goods or for purchases of securities, but in some cases they are held purely for speculative purposes. In any case, the funds are actually held abroad in the foreign *nostro* account in the name of the bank concerned, through which all operations on the account must be passed. But although such currency balances held on behalf of customers are held by the bank's foreign agent on behalf of the bank, the money

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belongs to the customer and not to the bank, and it is for this reason that distinct Nostro No. 1 and Nostro No. 2 Accounts are maintained by some Foreign Branches. In some banks these currency accounts of customers are known as "*Hold Accounts*", and they will be maintained by the head office or the branch of the bank at which the customer keeps his ordinary current account in much the same form as an account of the latter kind.

The balance so held may be built up by the customer either by the outright purchase of T.T. with instructions that all foreign currency is to be credited to the Hold Account, or by allowing the proceeds of bills for collection, or bonds or coupons sold, to remain at the foreign place of payment for use as opportunity arises.

The foreign currency balances or accounts of the various customers are known in the foreign branch as *loro** (i.e., their) balances or accounts, to distinguish them from the *nostro* (i.e., our) balances, comprising the foreign bank's own currency balances with its agents abroad. These accounts are kept in a Customers' Currency Ledger.

The currency balance is, of course, entirely at the risk and disposal of the customer, and the bank accepts no responsibility in the event of its being unable to obtain delivery or credit for the currency when required. In order to avoid any misunderstanding on this point, the customer is usually asked to sign an agreement in the following form on opening an account of this kind :- -

CUSTOMER'S REQUEST TO OPEN A FOREIGN CURRENCY ACCOUNT.

TO THE NORTHLAND BANK, LIMITED.

Date.....

DEAR SIRs,

I request you to open in your books in my name an account in French Currency, and in consideration of your so doing, I hereby agree that these funds shall be held abroad with your Correspondents in your name, and that such funds, together with any amounts which may subsequently be placed to the credit of this account are at my entire risk in every respect, and that it is clearly understood that you accept no responsibility whatsoever in respect of such funds.

Yours faithfully,

James Brown.

NOTE.—This form is particularly valuable when a customer desires to hold the currency of a foreign country wherein financial and monetary conditions are unstable. The form renders the customer alone responsible for any loss which may arise, as, for example, if the bank's foreign agent goes bankrupt. For purposes of the bank's audit the customer is from time to time sent a statement of his Foreign Currency Account and is required to sign an acknowledgment of the correctness thereof and of the fact that the funds are entirely at his own risk and responsibility.

* The term *loro* is sometimes used when one bank remits to another on behalf of a third party, when the amount is stated to be "for credit of *loro* account

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If the Foreign Branch is allowed interest by its agents abroad on its foreign currency balances in their hands, it will in certain cases pass on part of that interest to the customers who have accounts in the currencies concerned. This will depend, however, on the size of the customers' accounts and on their remunerativeness to the banker. Any interest allowed will, of course, be credited in the foreign currency concerned to the customer's *loro* account.

The advantages of the system will be apparent on a little consideration. Suppose that an importer buying goods abroad is required to make payment for them in foreign currency. As soon as he accepts the quotation in the foreign currency, he can at once fix the sterling equivalent of the goods, by purchasing immediately the requisite amount of the currency concerned, and having it placed to the credit of a Foreign Currency Account in his name. When he wishes to make a payment, he issues a cheque or bill against the balance outstanding, or, as is more usual, he instructs the bank to issue a draft to his order, or otherwise to transfer the necessary sums to the foreign exporter as, for example, by mail transfer or T.T.

If the importer has any payments to receive in the foreign currency concerned (as, for example, proceeds of bills drawn by him, or of coupons sent for collection), he may have the amounts credited to the foreign currency account for disposal as he may subsequently decide.

In the same way, an exporter may have all sums in foreign currency due to him credited to a foreign currency account in his name, with the object either of utilising the balances for any payments which he may have to make in that currency, or of selling the balance when he thinks it most opportune to do so. If and when he decides to sell, the bank will purchase all or a portion of the foreign currency balance from him at an agreed rate of exchange.

Clearly, an arrangement of this kind is of considerable advantage to an exporter now that goods sent abroad are almost always paid for in the currency of the importing country, and now that so many bills are drawn in foreign currency. The proceeds of such bills can be placed direct to the exporter's Foreign Currency Account, and the exporter can convert the currency as and when it suits him. He can thus await a *favourable* movement of the rate of exchange—though by doing so he also runs the risk of losing by an *adverse* movement.

the . . . Bank", meaning that the sum is to be credited to the account kept by the . . . Bank with the recipient.

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Another advantage of the foreign currency account both to importers and to exporters is that they save themselves not only the trouble of continual transfers in and out of foreign currency, but also the profit which would otherwise accrue to the bank as its "turn" on each conversion. This profit margin is, as we have seen, extremely small in the highly competitive exchange markets of to-day, and especially so in the case of important currencies, but it nevertheless amounts to a considerable sum on a turnover of any magnitude, and it is, therefore, an expense which a trader will naturally attempt to save if it is at all possible.

It sometimes happens that an exporter accumulates considerable sums on a foreign currency account, yet is at the same time short of liquid funds in his own currency, i.e., sterling. In such circumstances, it is not uncommon for the bank to grant him a sterling loan or overdraft against the security of his foreign currency balance, subject, of course, to the maintenance of an ample margin of foreign currency to provide for any adverse change in its value. Such advances are frequently granted by banks to customers who regularly operate on margins in staple commodities, such as grain or cotton, and may save the customers considerable expense which would otherwise be incurred in the remittance of funds to and fro between this and other countries.

Conversely, the customer may find that the total currency payments which he has to make exceed the currency credits which he has to receive, and he may then arrange to obtain temporary accommodation from the banker in the form of a loan on his Foreign Currency Account. But the banker's willingness to grant such accommodation will, of course, depend on the banking conditions existent in the foreign centre, on the absence of exchange restrictions, and on the security which the customer is able to offer.

Currency accounts are specially popular with insurance underwriters doing foreign business in respect of which the premiums are calculated as a percentage of the amount of currency which has to be paid in the case of loss. In such cases, the amount which requires to be sent home in sterling is the net profit over a period, and, as this is very small in relation to the turnover, it is more economical to use a currency account and so avoid the continual payment of a "turn" in the rate to the banker, as would be necessary if all premiums, on the one side, and all losses and expenses, on the other side, were regularly converted in and out of sterling as they arose.

Foreign Bills.—The next section of the Foreign Branch which we

have to consider is the Foreign Bills Department. This deals with bills drawn in sterling or in currency which have been received by the bank either for collection on behalf of customers or agents, or for negotiation, i.e., having been purchased by the bank with recourse in the event of non-payment. Particulars of all bills received for collection are entered by the department in suitable registers, and the bills are then despatched to the agent abroad with a request to obtain the proceeds from the drawee. In the case of sterling bills for collection the agent may be instructed either to remit a sterling draft on London in payment, or to credit the London bank with the sterling amount: in the latter case, the foreign agent will be debited in his *nostro* account. As a rule the proceeds of currency bills are credited by the agent to the currency account of the remitting bank.

So far as the agent abroad is concerned, there is no difference in procedure between a bill for collection and a bill received here for negotiation. Such bills are, however, differently dealt with in the Foreign Department, for while a bill for collection remains the property of a customer, a bill negotiated is actually purchased by the bank at the time it is received. Hence, when the banker *negotiates* a bill, he credits the customer at once, but when he receives a bill *for collection*, he does not credit the customer until he has received advice of payment. Then, on receipt of the sterling in London, or on receipt of advice of the credits in the case of currency items, he credits the customer with the proceeds in the case of sterling bills, and in the case of currency amounts, either (a) buys the currency at the rate of the day (or at the agreed rate if a forward contract has been arranged), and credits the sterling equivalent to the customer, or (b) places the currency amount to the credit of the customer's currency account if he happens to possess one.

Drafts, Mail and Cable Transfers Issued.—So far as their ultimate effect is concerned, the draft and the mail or cable transfer are very similar—all three enable funds to be transmitted from one centre for account of people in another—but, for reasons explained in Chapter VI, there are important differences both in form and in procedure.

In order to avoid risk of loss or delay it is clearly of first importance that due confirmation of the issue of drafts and transfers should be sent by the selling bank to its foreign agent. Hence, in the case of mail transfers, duplicates are usually forwarded by different mails, while in the case of drafts on distant countries, it is

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usual to issue the drafts in duplicate and also to forward duplicate advices thereof by separate mails. Cables and telegraphic transfers are likewise confirmed by duplicate advices sent by different mails, the advices being signed in all cases by duly authorised officials. The actual cables, it should be noted, are sent in code, the amount being verified by the inclusion of a "test-word".

For similar reasons, it is usual to advise foreign agents of all payments which are to be made to them, so that they can immediately communicate with the bank concerned if the expected funds are not received, and also in order that they can arrange their cash holdings with due regard to the expected transfers. As a rule, advices of this kind are forwarded by cable or telegraph if the expected payment is being made by either of these methods.

In the case of currency remittances, the agent, on receiving instructions to pay by mail or cable, immediately debits the issuing bank's currency account, but with regard to currency *drafts* the procedure varies. In some cases, the currency account of the issuing bank is debited by the agent immediately on receipt of advice of issue of the draft, but in other cases the debit is not passed until the draft is actually presented by the holder. In due course advice of the payment against the currency draft, mail transfer, or T.T. will be forwarded by post to the issuing bank by the foreign agent, and on receipt of such advice the Foreign Branch Accounts Department is in a position to check the entries already made to the foreign agent's credit in the *nostro* ledger.

So far as sterling drafts or transfers are concerned, the usual procedure is either to retain the necessary sterling amount on a special account in the Foreign Department until such time as the agent abroad reimburses himself by drawing on the issuing bank, or the amount may be credited at once to the *nostro* account of the foreign agent, or if no such account exists, the sterling amount may be paid over to the London agent of the foreign bank for its credit.

Inward Collections and Inward Credits.—The work of this department is to deal with bills, cheques, coupons, etc., payable in this country and forwarded to the Foreign Branch by its agents abroad for collection and credit of the proceeds, and also to handle all credits opened by its foreign agents for operation in this country. In some cases the Collections and Credits will be handled by separate departments of the Foreign Branch. Collections may be drawn either in *sterling*, or in *foreign currency*, the proceeds of the former being credited

to the agent's *vostro* account, and of the latter to the *nostro* account kept in his name.

Sterling collections will yield no exchange profit, so that unless they are being handled *franco*, i.e., free, a commission will be charged against the foreign agent. Bills drawn in terms of foreign currency which the Department receives for collection from foreign agents are marked, before presentation, with the rate of exchange at which the bank is willing to accept payment, i.e., the rate at which it is willing to *sell* the currency to the drawee. But the latter may, of course, refuse to accept the rate, and it is then a matter of bargaining between him and the banker, since, unless such bills include an exchange clause, they are legally payable at the *current* rate of exchange ruling on the date of payment.

Foreign Credits Outward.—As its name indicates, this section of the Foreign Branch deals primarily with the opening of credits abroad, either in currency or in sterling, and much of its work consists in the examination and confirmation of the relative documents and vouchers against which payments have been made by the agents in the foreign countries. In addition to commercial credits, this department may be responsible for the issue of world-wide letters of credit, travellers' cheques, and circular notes, although in some banks these duties are performed by a separate Drafts Department. It will be explained later that, in the last three cases, the cheques and notes are issued against payment of the relative amounts by the customer, but with ordinary commercial credits it is usual for the issuing bank to require satisfactory *cover*, and this generally takes the form of a sterling or currency deposit, the deposit being retained in the department on a special account earmarked against the particular credit.

On the issue of travellers' credits the customer's current account is debited with the total amount involved, and any unused balance is refunded when the letter of credit is returned. No entry is passed to the account of the foreign agent in the *nostro* ledger until receipt of due advice of a payment under the credit. So far as the agent is concerned, he reimburses himself as a rule by debiting the issuing bank's currency account in the case of a currency credit, and, in the case of a sterling credit, either by drawing in sterling on the issuing bank and negotiating the draft abroad at the prevailing rate, or by debiting the London bank in his *nostro* account.

It may be added that the work of this department has increased considerably in recent years, for the collapse of credit and the world

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failure of confidence following the War induced home traders to rely upon bank credits to an ever-increasing extent as the most secure means of financing their operations with other countries.

Foreign Cashier.—The foreign cashier's department is concerned with the purchase and sale of foreign notes and coins of all kinds. As a rule, the rate of exchange applicable to these articles differs slightly from the rates quoted for T.T., for they are largely affected by the relation between the demand for and the supply of the notes concerned in London, and also by the facility or difficulty with which the notes can be obtained from the respective financial centres abroad. Moreover, transactions of this kind are usually for comparatively small amounts; consequently the rates are not cut so fine as they are for large sums.

Again, the export of these articles is at times prohibited or curtailed by the foreign Governments concerned, while their transfer always involves expense in the way of insurance and loss of interest. Furthermore, the rates are to some extent dependent on the denominations of the notes available; on occasion notes of small denomination are at a premium in comparison with large notes, whilst at other times the reverse may be the case. For example, on a certain date the quoted Paris T.T. rates were :—

Buying 95·70

Selling 95·50

and at the same time the relative rates for notes were quoted as :—

Buying 96

Selling—small notes 95

large notes 95·25

It may be added that there exist in the City several foreign note brokers, who specialise in dealings in foreign notes of all kinds, and must not be confused with the foreign exchange brokers already discussed. The note brokers keep their own stocks of foreign notes and regularly visit the various foreign departments and banks in order to ascertain and satisfy their requirements, selling to them such currencies and denominations as they need and buying from them any surplus notes which they may have for disposal. In fact, the note brokers, who are *principals* and not agents, act as intermediaries between buyers and sellers of notes and thus perform a function somewhat similar to that of running brokers in connection with bills of exchange.

Foreign Coupons and Securities.—This section deals with currency coupons, bonds, share certificates, and other documents of a similar nature which have to be sent abroad for payment or sale, or for the renewal or provision of new coupon sheets as the case may be. It deals also with all stock orders for the purchase or sale of securities which are dealt with on the foreign bourses.

The coupons relating to many international stocks are expressed to be payable at the holder's option in London, New York, Paris, or some other foreign centre, the amount payable in each centre being clearly designated. Thus, a coupon may be payable for £1 in London, for \$4·86½ in New York, and/or Fcs. 124·21 in Paris. Clearly, a British holder will claim payment in that centre whose currency stands at the highest price in terms of sterling, provided, of course, that there are no exchange restrictions which prevent his obtaining payment (see *post*, Chapter XIX).

The routine work is in some respects very similar to that in connection with currency bills, for the coupons and bonds are either purchased by the bank with recourse, or are received for collection on behalf of customers, while, as in the case of currency bills, the agent abroad passes all disbursements or receipts of currency through the bank's currency account under advice.

One important difference arises, however, between the procedure relating to bills and that relating to coupons and dividend warrants, and this concerns the deduction of British Income Tax. Where the coupons or warrants are *purchased* by the bank with recourse the matter is a simple one, for tax at the appropriate rate is in such cases deducted from the sterling equivalent due to the customer. On the other hand, where the proceeds of the coupons are retained by the customer in currency, a proportion equivalent to the rate of tax—for example, at 4s. in the £ the proportion would be 20 %—is deducted from the currency total and is converted at the current rate of the day into sterling, the relative amount being paid over in due course to the Inland Revenue Authorities.

Dealers and Exchange Contracts.—Finally, we come to the Dealer's Office, the operations of which are ultimately dependent on the extent of the business transacted in all the other departments of the Foreign Branch. Upon the dealer devolves the task of ensuring that sufficient currency is available on the foreign *nostro* accounts to meet any commitments entered into by any of the other departments, and at the same time he is expected to utilise to the full extent balances transferred to these accounts as a result of the operations of the other

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sections. The dealer is therefore advised by the Accounts Department at the beginning of each day of the exact state of the bank's balances in the hands of its foreign agents, and he also receives from the other foreign departments immediate and accurate returns of all currency transactions for which they are responsible.

Omission to give the dealer prompt advice of all such operations may result in endless trouble and possibly in serious loss. For example, the omission of the Foreign Bills Department to make a return of a heavy payment to the bank's French franc account (as, for example, by the credit of proceeds of bills for collection) may result in his having *overbought** francs to meet commitments entered into by him in that particular currency. On the other hand, the omission of the Foreign Credits Department to advise him of an appreciable debit to the bank's New York *nostro* account may cause the dealer to become *oversold*† in dollars, i.e., he may have disposed of his available dollar balance on the market and be compelled to cover the credit transaction at a loss.

In practice, therefore, it is a general principle that no department shall pass an entry in a foreign currency unless the relative slip is initialled by one of the dealers, and as a further safeguard it is arranged that no operation in excess of a fixed limit, say \$500, shall be carried out unless a rate is first of all obtained from the Exchange Department.

In some Foreign Branches the *Exchange Contracts* section of the Dealing Department is responsible for the work which is performed in other banks by the *Foreign Instructions Department*. To this section are passed particulars of all exchange transactions completed by the dealers, and it is the business of the department to get into touch with the other parties concerned, and to confirm, or arrange for confirmation, of the deals by telephone, telegram or letter. In addition, this department is responsible for issuing any necessary instructions for the preparation of cables, drafts, or mail transfers, by the special sections which deal with those items.

In effect, the function of the Contracts or Instructions Department is to commit to paper the precise details of all the transactions effected

* Or "*gone long*" in.

† Or "*gone short*" in. In practice, it would scarcely ever happen that the position in an important currency was exactly square; but joint stock bank dealers always ensure that any difference between purchases and sales of a currency at the end of the day's business is trivial in relation to the turnover in that currency. Furthermore, for reasons already given, an outstanding balance in one gold currency may be regarded as being covered by a balance the other way in another gold currency.

by the dealer, chiefly by word of mouth. From the vouchers so prepared, all entries in the books of the Foreign Branch are ultimately completed, and it follows that extreme care has to be exercised by the staff concerned to ensure that all particulars given or received are entirely accurate, especially when messages have to be taken or transmitted by telephone or telegraph.

Cables and Correspondence Department.—This section of the Foreign Branch is responsible for most of the incoming and outgoing correspondence relative to the Branch, and for the work of coding and decoding cables and telegrams embodying instructions to and from the bank's agents in the foreign centres.

Customer's "Limits".—It is clear that, in purchasing from a customer instruments such as long bills, sight drafts, and coupons, the dealer runs certain risks of non-payment, and, as was explained on page 131, he ensures a right of recourse against his customer, should any such loss arise, by taking from him an "Authority for Collection or Negotiation". In so doing, the dealer is relying upon his customer to recoup him in the event of loss, but clearly it would be dangerous to place too heavy a reliance on any one "name"; hence it is usual for banks to place fixed "limits" on the amounts of contingent liabilities which may be outstanding in any one name on any one day. These "Limits", or "Sanctions", as they are sometimes called, are fixed by the management of the bank, and any dealer who incurs loss through exceeding a limit so fixed is likely to be censured.

Limits are fixed not only in respect of the various types of transactions carried out for specified private customers (e.g., forward contracts, purchases of long bills and sight bills), but also in respect of market names. The risk in the latter case is considerably smaller, of course, as the parties concerned are of high standing and the transactions are chiefly T.T.'s, though even with a T.T. there is a risk that the other party may default.

If, for instance, the dealer arranges to sell a T.T. on Paris to the X. Bank, he will have to make the necessary transfer in Paris some hours *before* he receives the sterling from the X. Bank. Although the risk is only of a few hours' duration, it is nevertheless substantial.

The V.C. Register.—For this reason all market deals involving payments *valeur compensée* are recorded in a special book, known as the "V.C. Register", showing the total risk in this connection outstanding against each "name".

To enable the dealer to see almost at a glance that the "V.C. risk" in respect of any one market name is not in excess of the limit

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fixed for that name, the Register is ruled with bought and sold columns on each side of the page, together with columns for the date of each transaction, the currency involved and its sterling equivalent (usually to the nearest £), and the value date. A separate page in the Register is allocated to each name, and the "sanction" or "limit" fixed by the management is clearly indicated at the head of the page.

So far as is possible, the entries are made in such a way that contracts maturing at the same time are close together, for the limit applies, of course, to *any one day*. The total amount of incomplete deals with any one market name may be twenty times the limit, so long as the commitment for any one day does not exceed it.

With a view to minimising the V.C. risk, every important dealer has a system whereby he advises his foreign agents of the sums which they ought to receive for his credit, whilst the agents have standing instructions to wire or cable immediately if an expected payment for the dealer's account is not received.

The V.C. risk in connection with *sales* of currency is not so marked, for in such cases the dealer has to receive sterling on this side against a currency payment by his foreign agent, so before entering into the risks for a new day he has only to ensure that he has received any outstanding sterling payments in respect of completed transactions.

Actually, the V.C. risk is negligible in connection with T.T. sales of dollars for delivery in the western hemisphere, for the reason that the New York Exchange Market opens when it is afternoon in London, and so a London dealer can easily obtain payment on this side in sterling before cabling his correspondent to transfer the dollars. On the other hand, the risk in respect of a *purchase* of dollars is a very real one, for the sterling payment must be made on this side before the dealer can possibly know from his correspondent whether or not the seller has executed his part of the bargain.

Special Returns in the Foreign Branch.—Periodically, the Foreign Branch compiles certain special reports for the information of the dealers and officials. Among these are:—

(a) **SPECIAL LIABILITY SHEETS**, giving details of transactions outstanding in the name of any one customer whose affairs require daily review, and specifying the daily cost of liquidating the outstanding position in the event of the customer's default.

(b) **RETURN OF FORWARD TRANSACTIONS OUTSTANDING** on the

date of the return, with the names of the customers for whom the transactions have been effected.

- (c) **PERIODICAL PROFIT SHEETS.**—From time to time, the balances of foreign currency on the various accounts are extracted from the *nostro* ledgers. The currency balances are converted into sterling on the date of the return, the profit or or loss up to date is calculated, and, if necessary, adjustment is made therefor in the accounts.

How Foreign Exchange Profits are Made.—Whilst the element of speculation necessarily enters into all foreign exchange operations, it is important to notice that the foreign exchange dealers in the banks and reputable financial institutions confine themselves almost entirely to what may be described as legitimate dealings as opposed to speculations pure and simple, which are concerned entirely with the endeavour to make a profit out of movements in the rates of exchange. And while the foreign exchange dealers naturally aim at making as much money as they can for their respective institutions, it must be remembered that the foreign exchange branches and departments have been organised very largely to provide English traders with the necessary facilities for dealing in foreign currencies.

London dealers, therefore, make it an almost invariable practice to "cover" as they go; if they sell a certain amount of foreign currency, they take the first opportunity to square their position by purchasing an equivalent amount, and *vice versa*. Their object is to end each day with a balanced book, to sell no more than they have bought, and to buy no more than they have sold.

Foreign exchange dealings fall into two chief categories:—

(1) *Selling exchange of one kind against purchases of exchange of another kind*, e.g., spot exchange against forward, cable transfers against long bills or cheques, short bills or cheques against long bills, and so on.

(2) *Selling one kind of exchange against purchases of the same kind of exchange*, e.g., forward T.T.'s against long trade bills, forward against forward, and so on.

The exchange dealer finds his best opportunities for profit in dealings of the first category. He buys any kind of maturing exchange which is offered to him, such as demand bills, short bills, long bills, coupons and drawn bonds, and against the proceeds he sells cables,

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mail transfers, cheques and sight drafts, according to the demand. In these operations he can make a profit not only from the difference between his buying and selling prices, but sometimes, also, from differences in the rate of interest earned by funds in this country and abroad.

In this category, dealers find a fruitful and non-speculative source of profit in the sale to importers of demand drafts drawn against the proceeds of long bills drawn against exports of produce. This type of operation formed the bulk of foreign exchange business in pre-war days, and, although it has been lessened to some extent by the greater popularity of cable remittances, it is a class of business which still affords opportunities for profit.

In the same category are placed the now frequent and profitable operations involved in buying "spot" and selling "forward", or *vice versa*. The system of forward exchange has proved such a boon to traders during periods of considerable exchange fluctuations that a vast amount of business is now transacted in forward currencies, and the existence of a well-developed forward market presents the exchange dealer with an excellent opportunity of investing his funds in other centres by "spot" purchases of their currency whilst covering himself against exchange fluctuations by selling an equivalent amount of the currency forward.

Arbitrage operations in exchange are rather less frequent, but many of them are accompanied by considerable profit. Thus, a dealer who is faced with a heavy demand for exchange on Paris may find that his best method of getting funds to Paris to cover his sales of francs is to buy marks and to use them in Berlin for the purchase of francs for remittance to his Paris agents.

The opportunities for profit in the second category are not as great as those in the first. Clearly, there can be very little difference between the prices quoted at any particular time for cables or for demand bills, so that a banker does not stand to make much money merely by buying one cable and selling another, or by buying a demand draft and selling a mail transfer against it, or by selling forward against a forward purchase of the same currency. Nevertheless, a small profit is assured, since the banker always maintains a margin or "turn" between his buying and selling prices: he never quotes a customer exactly the same rates as those at which he himself is able to deal on the Market. In quoting a rate to a customer he always makes a small allowance on the rate at which he can obtain cover in the Market, adding or deducting his charge as the case may be.

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Other Sources of the Foreign Branch's Profits.—Apart from the actual dealings in exchange here discussed, foreign exchange bankers and foreign departments make considerable profits from a great variety of related operations, such as issuing letters of credit, travellers' cheques, and circular notes payable in foreign currencies; arranging for exports and imports of gold when the exchange position makes such operations profitable; loaning funds to agents in other centres; buying and selling foreign coins and notes; investing money abroad; discounting and negotiating bills; collecting bills, cheques, coupons, and drawn bonds; purchasing and selling international securities; handling merchandise, and performing various other services on behalf of home and foreign customers, agents, and correspondents.

CHAPTER IX

FOREIGN EXCHANGE LISTS AND QUOTATIONS

The Foreign Exchange Table.—The lists of current rates of exchange between London and the leading countries of the world which are published every morning in the leading newspapers are usually compiled from information supplied either by the joint stock banks or by the private banking house, Messrs. Samuel Montagu & Co.

Every business day this well-known firm makes two lists of rates available to every newspaper, one giving the "closing" rates ruling in the Market at 5.30 p.m. on the day in question, and the other giving the "range" of quotations for that day, i.e., the highest and lowest rates at which business was done in the Market, this list being compiled from information supplied by all the more important brokers as to the highest and lowest rates at which they have dealt during the day.

Though most of the published tables are built up from data obtained from either or both * of these sources, it is unfortunate for students that the method of presentation and the arrangement of the tables vary considerably as between one newspaper and another. Some papers give only one rate of exchange on each centre, that rate being either the mean or average of the rates of exchange for the preceding business day, or the "middle rate" ruling at the close of business on the date indicated. Other papers (e.g., *The Times*) give the "range" of quotations on the two preceding business days; some (e.g., the *Financial Times*) give the "closing" rates on those days, whilst the *Financial News*, a specimen of whose exchange table is reproduced on page 176, very instructively gives both the closing rates and the range of quotations for the two preceding business days.

Unfortunately, too, there is an absence of uniformity as to the order of the currencies in the different tables. In some papers, the various centres are arranged into groups, but the system of grouping is not uniform, some papers adopting a geographical grouping and

* The table in the *Financial Times* is built up from information supplied by Messrs. Montagu, by the Eastern Exchange banks and by the South American banks.

others a division according to the specialisation of business in the Foreign Exchange Market.

The former method is used in the specimen list from the *Financial News*, the names of the centres given in the first column being arranged in groups according to the following geographical distribution so that readers can more easily spot the market in which they are interested: (a) North America; (b) the Latin Countries; (c) Scandinavia; (d) Central Europe; (e) South-Eastern Europe; (f) South America; (g) Near East; (e) India and the Far East; and (h) Japan.

New York takes pride of place because transactions in dollars are by far the most important, while Montreal and Mexico are shown in association with New York because of the close relationship between the currencies of those places and the United States dollar. Because of the position of the franc as the second most important foreign currency from London's point of view, Paris appears next at the head of the second group, comprising leading Continental currencies in which transactions on the London Market are most numerous. Amsterdam follows at the head of the so-called "Scandinavian group" of currencies, though in other papers the florin is usually included in a group, headed by Paris, which is known as the "Gold bloc", i.e., the group of Continental countries which still maintain the gold standard.

In the fourth group, headed by Berlin, are the less important Continental currencies, sometimes referred to as the "Exotics", which, having been established or reconditioned since the Great War, have since had chequered careers. Tallinn (Estonia), which appears in this group, is usually included by other papers with the Scandinavian countries, and rightly so, because her standard currency is intrinsically the same as that of Norway, Sweden and Denmark.

Athens heads the fifth group, comprising the currencies of Mediterranean countries in the East of Europe. Buenos Aires follows in the van of five South American currencies, whilst Alexandria (Egypt), like Kobe (Japan), enjoys the distinction of having a group to itself. Bombay stands first of a group which includes the Indian and other Far Eastern currencies, most of which are quoted as *pence* rates, i.e., in terms of shillings and pence to the foreign unit.

Type of Remittance Quoted.—The majority of the rates quoted in the table reproduced, as in the case of all foreign exchange tables published in London, are the rates quoted by *London dealers* for telegraphic transfers on the centres indicated, i.e., the rates are those at which payments in the foreign centres can be effected immediately.

FOREIGN EXCHANGE RATES. (From the Financial News, 12th March, 1934.)

Centre.	Country.	Method of Quoting.	Par of Exchange.	March 10.		March 9.		Bank Rate, %.
				Close.	Range.	Close.	Range.	
New York	United States	Dollars to £1	4.866	5.071-074	5.074-5.08	5.074-074	5.074-081	14
Montreal	Canada	Dollars to £1	4.866	5.08-5.09	5.08-5.09	5.08-5.09	5.08-5.10	14
Mexico	Mexico	Pesos to £1	9.76	17.50-18.50	17.50-18.50	17.50-18.50	17.50-18.50	3
Paris	France	Francs to £1	124-2134	77.5-77.5	77.5-77.5	77.5-77.5	77.5-77.5	3
Brussels	Belgium	Francs to £1	35	21.78-21.80	21.78-21.83	21.78-21.80	21.77-21.83	2
London	Switzerland	Francs to £1	25-2215	15.71-15.73	15.70-15.73	15.71-15.73	15.70-15.76	2
Madrid	Portugal	Pescetas to £1	110	1094-1104	1094-1104	1094-1104	1094-1104	5
Milan	Spain	Pescetas to £1	25-2215	37.5-37.5	37.5-37.5	37.5-37.5	37.5-37.5	5
Amsterdam	Italy	Lira to £1	92.46	59.5-59.5	59.5-59.5	59.5-59.5	59.5-59.5	5
Copenhagen	Holland	Guilder to £1	12.107	7.54-7.55	7.54-7.55	7.54-7.55	7.53-7.56	3
Hamburg	Denmark	Kroner to £1	18.139	22.35-22.45	22.35-22.45	22.35-22.45	22.35-22.45	3
Oslo	Norway	Kroner to £1	108-23	22.51-22.74	22.51-22.74	22.51-22.74	22.51-22.74	4
Stockholm	Sweden	Kroner to £1	18.159	19.85-19.95	19.85-19.95	19.85-19.95	19.85-19.95	3
Berlin	Germany	Mark to £1	18.159	10.37-10.41	10.35-10.45	10.37-10.41	10.35-10.45	3
Budapest	Hungary	Forint to £1	40.43	12.76-12.81	12.76-12.81	12.76-12.81	12.77-12.82	4
Prague	Czechoslovakia	Koruna to £1	37.22	174 (a) 174	174 (a) 174	174 (a) 174	174 (a) 174	4
Vienna	Austria	Schilling to £1	184.25	122.1-122.1	122.1-122.1	122.1-122.1	122.1-122.1	3
Kyoto	Japan	Yen to £1	24.464	27-29	27-29	27-29	27-29	5
Tallinn	Estonia	Kr. to £1	18.159	30-33	30-33	30-33	30-33	6
Riga	Latvia	Lata to £1	25.2215	17.1-18.4	17.1-18.4	17.1-18.4	17.1-18.4	6
Moscow	Russia	Roubles to £1	9.458	13-17	13-17	13-17	13-17	6
Warsaw	Poland	Zloty to £1	43.35	5.874-5.894	5.874-5.894	5.874-5.894	5.874-5.894	5
Athens	Greece	Drachmas to £1	37.5	261-274	261-274	261-274	261-274	7
Belgrade	Yugo-slavia	Dinars to £1	278.316	530 (a)	530 (a)	530 (a)	530 (a)	7
Bucharest	Rumania	Lei to £1	813.6	218-228	218-228	218-228	218-228	6
Constantinople	Turkey	Lira to £1	110	500-520	500-520	500-520	500-520	6
Sofia	Bulgaria	Leva to £1	673.66	625 (a)	625 (a)	625 (a)	625 (a)	7
Buenos Aires	Argentina	Peso to £1	47.624	400-430	400-430	400-430	400-430	7
Lima	Peru	Sol to £1	17.38	27-27.4	27-27.4	27-27.4	27-27.4	7
Monte Video	Uruguay	Peso to £1	61.4d.	20-20.1	20-20.1	20-20.1	20-20.1	7
Rio de Janeiro	Brazil	Per Dollar	51.4d.	38.4d. (a) 17	38.4d. (a) 17	38.4d. (a) 17	38.4d. (a) 17	7
Valparaiso	Chile	Dollars to £1	5.899d.	44d. (a) 17	44d. (a) 17	44d. (a) 17	44d. (a) 17	7
Alexandria	Egypt	Piastres to £1	40	97-97.1	97-97.1	97-97.1	97-97.1	3
Bombay	India	Per Rupee	184.	18.1-18.4	18.1-18.4	18.1-18.4	18.1-18.4	3
Calcutta	India	Per Rupee	184.	18.1-18.4	18.1-18.4	18.1-18.4	18.1-18.4	3
Hong Kong	Hong Kong	Pence to £1	—	18-18.4d.	18-18.4d.	18-18.4d.	18-18.4d.	3
Manila	Philippines	Pence to £1	24.066d.	—	—	—	—	3
Shanghai	China	Pence to £1	24.	16-16.4d.	16-16.4d.	16-16.4d.	16-16.4d.	3
Singapore	Straits Settlement	Pence to £1	24d.	28.1-28.4	28.1-28.4	28.1-28.4	28.1-28.4	3
Batavia	Java	Per Raht	12.107	22d.	22d.	22d.	22d.	3
Kobe	Japan	Per Yen	24.56d.	7.50-7.60	7.50-7.60	7.50-7.60	7.50-7.60	3

• Rate quoted on London. 190 days. 1 Nominal. 11 Official Rate. (a) Sellers only.

Author's Note.—The table as published by the newspaper contains two columns additional to those here reproduced, one giving the date on which the Bank Rate in the foreign centre was last changed, and the other repeating the names of the centres at the end of the table for the convenience of the reader. In place of the latter, a column has been included in which is specified the country concerned opposite each centre quoted.

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It will be observed, however, that some of the centres are asterisked, and that a footnote to the table states that the quotations so distinguished are rates *on London*, i.e., the latest available rates for remittances to London from the centres concerned, in which case the quotations usually reach the bank dealers overnight by cable from their agents and correspondents in the foreign centres.

The rates for Lima and Valparaiso are further distinguished as "90 days", which means that the rates are the latest ones quoted by the banks in *those centres* for dealing in 90 days' *sight bills on London*. Where the term "sellers" is indicated, the meaning is that, whereas there were sellers of the currency concerned, there were no buyers *offering* to take supplies; in other words, the currency was being pressed for sale.

When the exchange is described as "nominal", the meaning is either that no exchange business was transacted on the date indicated, or that, because of national difficulties or the existence of restrictions, no exchange operations were possible. The meaning of the term "official", applied to some of the rates in the table, is discussed below on page 180.

The Double Quotation.—In the table given there is in the case of most of the currencies a "double-quotation" in both the "close" and the "range" columns. In the "close" columns, the double quotation represents the dealers' "two-way prices"—at one of the rates the bank dealers were offering to sell the currency concerned ~~at~~ the close of business, whilst at the other rate they were willing to buy, subject to small adjustments if the business was either very small or unusually large. The difference between these two rates represents the dealer's margin for profit, and is comparable with the jobber's turn on the Stock Exchange.

It will be observed that the difference between the two prices is extremely small in some cases (e.g., for New York it is only $\frac{1}{2}$ cent), whereas in other cases the difference is much higher (e.g., for Sofia, it is as much as 30 leva). In general, the wider the market in a currency, the narrower the margin between the buying and selling prices on the Market. If there are only a few people wishing to buy and sell a given currency, then it is obvious that the rate of profit must be higher than in the case of a currency (such as the dollar) wherein transactions may run into many millions in the course of the day and where the size of the turnover permits good profits to be made even at a very small turn between buying and selling. Moreover, exchange brokers naturally expect a larger commission on deals in

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currency wherein the market is narrow than on deals in a very active currency.

Finally, there is the consideration that, if a currency is highly speculative and subject to marked fluctuations, dealers who have to cover themselves charge wider prices in order to protect themselves to some extent against the risk that rates may have moved against them before they can "marry" their transactions. It is for this reason that the spreads between buying and selling prices are wider in a time of uncertainty and speculative activity than they are in more normal circumstances. Thus, the spread between the quotations for dollars has been much wider since we have been off the gold standard than it was between 1925 and 1931.

The question now arises: Which of the two rates so quoted is the dealer's buying price and which is his selling price? Clearly, the London dealer expects to buy more foreign currency per £1 than he is willing to sell, so that the higher rate in foreign currency is his buying price, and the lower rate is his selling figure. Thus, the closing quotation on New York for 10th March, $5\cdot07\frac{1}{2}-07\frac{3}{4}$, means that London dealers were selling dollars T.T. at $5\cdot07\frac{1}{2}$ per £1 and buying dollars T.T. at $5\cdot07\frac{3}{4}$ per £1.

In the case of pence rates quoted in *London*, the lower quotation is the dealer's buying price and the higher figure the dealer's selling price. Thus, at the close of business on the 10th March, the London banks were buying T.T. on Bombay at $18\frac{3}{32}$ d. per rupee and selling such remittances at $18\frac{1}{8}$ d.

Here it is most important to notice that the buying and selling prices are reversed in the case of the *asterisked* rates which are quoted *from abroad on London*. Thus the closing rate on London in Hong Kong on the 10th March was $18\cdot18\frac{3}{4}$ d., and, as the banks in that centre are buying and selling sterling in exchange for the local currency, it is obvious that they would be buying at the high rate, viz., $18\frac{3}{4}$ d., and selling at the lower rate of 18d. per dollar.

In the "range" columns, the two rates are not "two-way" prices: they represent the extreme limits to the prices quoted by the dealers at any time during the day in question; in other words, the highest and lowest rates at which business was done on that date.

It must be reiterated that, in the case of the important exchanges, the rates which are thus published agree with the rates applied to only a small part of the actual transactions in the Market. The actual rate at which business is done depends on the magnitude of the opera-

tion, on the keenness of the bargaining and on other considerations, the chief, of course, being the relation between the demand for and the supply of the foreign currency concerned *at the time of the bargain*. A heavy demand and a short supply sends prices up; a redundant supply coincident with weak demand brings prices down.

In general, business in the Market may actually have been done somewhere between the two published rates. If the latest rates on New York are given as $4\cdot86\frac{5}{10} - 4\cdot86\frac{3}{8}$, the figures mean that business was *offered* by the dealer furnishing the quotations somewhere near the rates given, i.e., that he was willing to sell dollars somewhere near $4\cdot86\frac{5}{10}$, and that he was ready to buy at approximately $4\cdot86\frac{3}{8}$. Obviously to every transaction there is both a buyer and a seller, and the final rates at which transactions are effected are fixed only after some slight bargaining, say, slightly more than $4\cdot86\frac{5}{10}$ for sellers and slightly less than $4\cdot86\frac{3}{8}$ for buyers, probably at $4\cdot86\frac{11}{32}$.

Moreover, in the case of sales of foreign currencies, as in the case of sales of other commodities, there is a "retail" and also a "wholesale" price. A trader who has to deal in large amounts of foreign currency will generally be quoted somewhat finer rates by the dealer in order to secure the business. Again, a dealer who undertakes a relatively small operation will not as a rule immediately cover himself as he would do in the case of a large transaction. Consequently, he may for a time have to carry an open position in respect of the small operation, so, to cover himself against a possible movement of the rate against him, he will probably charge the customer a little extra for the additional risk.

The Foreign Departments of the banks send the larger branches each evening a list of rates for their guidance on the following day, although all important operations above certain fixed limits are based on rates obtained by telephone direct from the dealers at Head Office.

Ordinarily, the rate given to an important customer in London will be that ruling when the enquiry is made or the order executed, and this may differ considerably from the closing rate and from the extreme rate for the day as given in the Press. On the other hand, for small transactions in their Metropolitan and country branches, the banks usually apply *The Times middle rate for the previous day*, i.e., the mean of the two extremes for buyers and sellers, with, of course, the allowance of a margin for their profit.

It should now be clear to the reader why the rates at which banks transact business for their customers rarely coincide with the rates

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published in the newspapers—a fact which not infrequently calls for a little ingenious explanation on the part of a harassed bank cashier or accountant.

Close Price and Wide Price.—When the margin between the buying and selling rates quoted by a dealer is small, the customer is said to obtain a "*close price*", and it may be regarded as an indication that the rate of exchange concerned is fairly steady. Where, however, there is a good margin between the two figures, it is a sign that the exchange concerned is fluctuating and uncertain, the quotation being in such circumstances referred to as "*wide*". The mean of any two buying and selling prices is called a "*middle price*", to be clearly distinguished from *The Times* "*middle rate of the day*", which, as already explained, is the mean of the *extreme* buying and selling prices quoted by London dealers on the previous day. Since the abandonment of the gold standard by this country in 1931, exchange rates have fluctuated widely and rates are now quoted with a much wider margin than was the case when we were on the gold standard.

"Official" Quotations.—We have observed that some of the rates in the London Foreign Exchange table are described as "*official*" rates, and it will be seen that, in each of such cases, there is only a single quotation. In some tables of exchange rates all the quotations are of this character, as, for example, in the tables, reproduced on pages 188 to 190, which are issued in New York, Paris and Berlin.

In some cases, i.e., in the case of countries where exchange dealings are subject to official control, these official rates are fixed by the Government or central bank; in other cases, they are fixed by certain brokers appointed by a committee representative of the Foreign Exchange Market, and arrived at by a consideration of the rates at which business was actually done in the Bourse itself at a certain fixed hour on the date concerned, 1.30 in some centres, 2.30 in others, and so on.

The great advantage of the latter arrangement is that it provides an official and generally accepted rate for any particular date, whereas different methods of quoting the rates such as exist in London give no really satisfactory method of record. Moreover, in some centres the official quotation settles once and for all the rate at which bills drawn in foreign currency on the country concerned have to be paid, the rate so fixed being valid up till twelve o'clock the next day, provided, of course, a bill bears no special exchange clause which entitles the collecting banker to collect at a different rate.

Prior to 1921 a quasi-arrangement of the sort existed in London,

the rates fixed at the bi-weekly meeting of bankers and brokers, and published as the *London Course of Exchange*, being regarded as more or less official. Nowadays, however, there are no published lists of London exchange rates which are regarded as official in the sense that they are accepted as an unassailable basis for dealings in the Market or that they can be insisted upon for any purpose, though the list of quotations which appears in *The Times* has an accepted standing inasmuch as the rates therein are regarded as trustworthy evidence for legal and State purposes.

When, therefore, a banker in the City now presents for payment a draft drawn, say, in marks on London, he attaches a slip giving the amount of sterling he will accept for it, leaving it to the drawee either to accept that rate, or to try to do better in the market or with his own banker, as, for example, by buying a banker's draft in marks for the face amount of the bill and paying this bank draft to the banker presenting the bill in settlement thereof. Legally, the presenting banker can, of course, demand payment *in sterling*, calculated at the current rate of exchange (*Bills of Exchange Act, 1882, Section 72*).

System of Notation.—A final point to be observed in regard to published rates is that whereas some rates are given in decimal form, others are expressed by whole numbers and vulgar fractions, though the latter are invariably fractions which will decimalise exactly, i.e., multiples of $\frac{1}{64}$ (e.g., $\frac{11}{64}$, $\frac{15}{32}$, $\frac{1}{16}$, $\frac{7}{8}$, $\frac{3}{4}$, $\frac{1}{2}$, etc.). Fractions such as $\frac{1}{3}$, $\frac{1}{7}$, $\frac{1}{9}$ are *never* quoted or used in foreign exchange work.

In practice, rates of exchange are usually quoted on the Market to the nearest "step" or dealing figure which, for the time being, is being applied to the particular rate concerned, e.g., to the nearest $\frac{1}{64}$ of a cent for the dollar rate, the nearest $\frac{1}{64}$ of a penny for the rates on the Far East, to the nearest $\frac{1}{4}$ centime in the case of the Swiss, and Belgian rates and so on. A rate thus given to the nearest dealing figure is sometimes described as the nearest *commercial* or *market rate*.

The steps and fractions are in no sense *permanently* fixed. When business in the leading currencies is very brisk, finer rates and so smaller fractions may be quoted than when business is stagnant. Dealers who are actively competing for business will not be reluctant to quote in smaller fractions than is usual if they are thereby enabled to secure an order. In general, the wider the market in a currency the smaller the fractions in which it is dealt and the narrower the margin between buying and selling prices. Conversely, the narrower

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the market in a currency, the larger the fractions and the wider the difference between the two-way quotations.

Par of Exchange Column.—The figures included in this column are the *approximate* equivalents of the British sovereign in terms of the currency of the various centres indicated. Thus the mint parity between Britain and Switzerland is given in exchange tables as Fcs. 25·22 or 25·22½, although the equivalent obtained by calculation is 25·2215.

The advantage of the column of parities is that it enables us to see at a glance whether the rates given in the table are favourable to this country or not, and for this purpose we must keep in mind our maxim that "High rates are for us, and low rates against us". If a rate given is in foreign money, and is over the Mint Par, it is in favour of Britain, and *vice versa*. Hence, in the table on page 176, the rates on Montreal, Mexico, Madrid and the Scandinavian centres are all in our favour, whereas the rates on Paris, Brussels, Geneva, Milan, Amsterdam and Berlin, amongst others, are markedly against us.

On the other hand, rates in pence and shillings per foreign unit are favourable for this country when the foreign coin exchanges for less than its par value in our money. "Low rates are for us" in these cases, so that, in the foregoing list, the rates on Buenos Aires, Monte Video, Rio and Kobe are all in our favour, whereas those on Bombay, Calcutta, Singapore and Bangkok are against us, since they are quoted *above* the par of exchange.

No comparison of the position of the Hong Kong and Shanghai rates can be made, because no Mint Par is given for these places, which have a silver and not a gold standard currency.

The Foreign Exchange Article.—In nearly all newspapers which publish foreign exchange rates, the table is accompanied by a brief commentary on the principal movements of the foreign exchange rates during the preceding business day. Unfortunately, the comments are always couched in market jargon, which is almost unintelligible to those well versed in Foreign Exchange, let alone the ordinary reader, and it is by no means uncommon to find in the comments some indication of a serious confusion of thought on the part of the assistant City Editor responsible for their compilation.

The reader who seeks to unveil the mysteries of modern foreign exchange must, however, make it his first business to obtain such an acquaintance with the foreign exchange lists and their accompanying market report as to be able to understand immediately what the writer wishes to convey. With the object of affording some assistance in this

direction, we will proceed to consider, step by step, the remarks which have appeared in *The Times* foreign exchange article on two different occasions.

"The Times" Foreign Exchange Article.

EXAMPLE I.

The New York exchange displayed strength during the earlier part of the day, the rate rising to $\$4.85\frac{3}{16}$. Subsequently, however, much of the advance was lost, dollars being finally bid for on London account, and the closing quotation was $\$4.85\frac{1}{2}$, a rise of $\frac{1}{2}$ c. on balance. Forward dollars were not quite so much offered, particularly in the case of the longer dates. A sharp rise, to $\$4.86$, occurred in the Montreal rate. The German exchange at 20 m. 40 was slightly easier, but some of the other Continental rates continued to move in favour of sterling, the Swiss exchange further advancing to 25 f. 20 $\frac{1}{2}$, the Dutch to 12 fl. 08 $\frac{1}{2}$, the French to 124 f. 07 $\frac{1}{2}$, and the Swedish to 18 kr. 14. Spanish pesetas were dearer, the Madrid rate closing 2 c. lower at 29 p. 71 $\frac{1}{2}$, and the Italian rate moved in favour of the lira. Turkish currency showed depreciation. Weakness was again apparent in the Japanese exchange, the Kobe rate closing $\frac{1}{2}$ d. lower at 1s. 10 $\frac{1}{2}$ d.

"The New York Exchange displayed strength during the early part of the day, the rate rising to $\$4.85\frac{3}{16}$." This is a particularly good example of the type of comment which cannot fail to confuse the student of Foreign Exchange. In seeking to determine its meaning we must remember that the City Editor is referring to rates of exchange quoted by London on other centres, and, therefore, that in this statement he is dealing with the London rate of exchange on New York. He means that during the early part of the day the rate showed strength so far as London was concerned, i.e., that more dollars were purchasable per £1, and that the rate accordingly rose to $\$4.85\frac{3}{16}$.

"Subsequently, however, much of the advance was lost, dollars being finally bid for on London account, and the closing quotation was $\$4.85\frac{1}{2}$, a rise of $\frac{1}{32}$ c. on balance." This means that, as the day wore on, dealers in London were anxious to buy dollars and consequently forced up their value relative to sterling, i.e., fewer dollars could be purchased per £1 and the rate of exchange therefore moved against London and in favour of New York. Nevertheless, this demand for dollars did not completely wipe out the previous advance in favour of London, and at the close of business the rate of exchange was about $\frac{1}{32}$ c. above that for the previous day.

"Forward dollars were not quite so much offered, particularly in the case of the longer dates." A currency, like any other commodity, is offered when sellers thereof are in excess of buyers. On the date in

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question, sellers were not as eager to dispose of dollars for forward delivery, particularly for delivery in two or three months' time.

"The German Exchange at 20 m. 40 was slightly easier." The term "easier" in reference to a rate (as distinct from a currency) is used by City Editors in the same sense as "weaker", so this comment is intended to mean that the rate had fallen, i.e., that fewer reichsmarks were purchasable per £1 and consequently that the rate on Berlin moved slightly against London.

"Some of the other Continental rates continued to move in favour of sterling, the Swiss Exchange further advancing to 25 f. 20½, etc." A movement in favour of sterling means that the £1 can purchase more foreign currency than previously, hence the several rates referred to moved upwards, and the currencies concerned became less valuable in terms of English money.

"Spanish pesetas were dearer, the Madrid rate closing 2 c. lower at 29 p. 71½ c." Since pesetas were dearer, fewer were purchasable per £1, and consequently the rate on Madrid fell until at the close of business, the rate quoted was about 2 centimos below the closing rate for the previous day.

"The Italian rate moved in favour of the lira." By this statement it is meant that the lira became more valuable in terms of sterling, i.e., the rate moved downwards, so that fewer lira were purchasable per £1.

"Turkish currency showed depreciation." A currency depreciates when more of it can be bought per £1 than before. Consequently, more Turkish piastres were purchasable per £1 on the date in question than were purchasable on the preceding business day, and the rate therefore rose in favour of London.

"Weakness was again apparent in the Japanese exchange, the Kobe rate closing $\frac{1}{10}$ d. lower at 1s. 10 $\frac{9}{10}$ d." This means that sellers of yen were more in evidence than buyers, so that fewer pence had to be given per yen than on the preceding day, i.e., the yen had weakened or fallen in value in terms of sterling.

If the reader will carefully consider this comment in relation to those made on the New York and Berlin rates, he will understand how the City Editor of *The Times* uses the terms *weak* and *strong*. He refers to the London on New York Exchange as "displaying strength" and "rising", whereas he speaks of the "weakness" of the Japanese Exchange because the rate had fallen. He refers also to the German Exchange being "easier" (i.e., weaker) because the rate had fallen.

Considerable care must be exercised in interpreting these terms

when applied to *rates*. A rate—like a plant—is stronger when it rises and weaker when it falls, and this is the case whether the rate is quoted in currency or in pence. Unfortunately, however, the terms are liable to cause confusion because, if a *currency* rate rises and is described as “stronger”, the *value* of the currency is actually weaker, because more of that currency is purchasable per £1; whereas, if a *pence* rate rises, the value of the currency in terms of sterling also rises.

In the case of a *pence* rate, therefore, a weakness in the rate will coincide with a weakness in the currency. In the case of a *currency* rate, on the other hand, the rate will be weak when the value of the currency is strong, and *vice versa*.

EXAMPLE II.

Weakness of French francs was again the dominating feature of the foreign exchanges. French purchases of sterling were again in evidence, and in the afternoon New York also showed an inclination to support the pound. During the morning the New York rate remained at about \$3·28½, but shortly after midday it rose sharply and eventually reached \$3·30½ before sales of sterling in the late dealings caused the rate to react and close at \$3·28½, compared with \$3·28½ on Wednesday. Forward dollars were rather wanted, the discount being ¼-½ c., one month, and ½, three months. Francs were at a discount in all other gold currencies and the Paris London rate rose to 84½ f. before a reaction occurred which left the closing rate at 84½ f., a rise of ½ f. on the day. Forward francs were generally quoted at about par. Other Continental gold exchanges showed small rises, the Belgian closing at 23·76½ b., the Dutch at 8·18½ fl., and the Swiss at 17·11 f. A further advance to 18·35 kr. occurred in the Swedish exchange, and the Oslo rate was also higher at 19·43½ kr. Japanese yen were a little dearer at 1s. 3½d. China silver exchanges were slightly easier at 1s. 3½d. for Hong-kong and 1s. 8½d. for Shanghai. The Argentine exchange was again lowered, being quoted at 42½d., sellers.

“*Weakness of French francs was again the dominating feature of the foreign exchanges.*”—Here the reference to the currency as “weak” means that its value is tending to decline in terms of other currencies. Since the weakness of francs is spoken of as being the dominating feature of the foreign exchanges, it may be assumed that francs were falling in value not only in London, but also in other important centres. Further, the word “again” infers that the tendency had been apparent also on the previous day.

“*French purchases of sterling were again in evidence, and in the afternoon New York also showed an inclination to support the pound.*”—The weakening of francs would, of course, be due to sales of francs by people in other countries and/or purchases of foreign currency on French account. French purchases of sterling would tend to raise the value of the pound in terms of francs, i.e., would cause the franc rate to rise. This it actually did, as the writer explains later.

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Owing to the difference in time, the New York Market does not open until it is afternoon in London. The statement that "New York showed an inclination to support the pound" implies that, as soon as orders from New York began to come in, there were more offers to buy sterling than to sell it.

"During the morning the New York rate remained at about 3·28½, but shortly after midday, it rose sharply." It may be assumed from this that in the early dealings there was no great divergence between offerings and purchases of dollars, as the rate showed little change from the overnight rate. The purchases of sterling by New York to which the writer has already referred naturally caused sterling to become more valuable in terms of dollars: more dollars had to be offered for each pound; and accordingly the rate rose to a higher figure.

"(The rate) eventually reached \$3·30½ before sales of sterling in the late dealings caused the rate to react and close at \$3·28½, compared with \$3·28½ on Wednesday." It would appear that when the New York rate had risen as high as \$3·30½ per £1, dollars were regarded as an attractive purchase. Hence, towards the close of business in the afternoon, dealers began to purchase dollars (or sell sterling). These operations would naturally cause the sterling value of dollars to rise and the London-New York rate of exchange to fall, fewer dollars being offered for each pound. One would conclude, however, that on the day's dealings sellers of dollars predominated as sterling rose in value by the end of the day's business, when the ruling rate was \$3·28½, i.e., ½ above the previous day's closing rate of \$3·28½.

"Forward dollars were rather wanted, the discount being $\frac{3}{16}$ - $\frac{1}{4}$ c., one month, and $\frac{11}{16}$ c., three months." Forward dollars, i.e., dollars for delivery at a fixed future date, are at a discount when they are less valuable than spot dollars and the forward rate (being expressed in dollars per £1) is higher than the spot rate. The market quotations are for forward "swaps", which will be explained in Chapter XI. Since forward dollars were "wanted", i.e., were in demand, it may be inferred that they were quoted at a higher discount on the previous day.

"Francs were at a discount in all other gold currencies, and the Paris-London rate rose to 84 $\frac{11}{16}$ f. before a reaction occurred which left the closing rate at 84½ f., a rise of ½ f. on the day." If francs were at a discount in all other gold currencies, the value of francs in centres such as New York, Berlin, Zurich and Amsterdam would have fallen below the value denoted by the Mint Par ratio. The statement that the franc rate rose confirms the earlier statement that francs weakened,

a rise in the London rate denoting a fall in the value of francs. As in the case of the dollar rate, it is apparent that early purchases of sterling were succeeded later by sales, so that the early rise in the rate was not held. The rate of $84\frac{1}{2}$ f. at the close of business is stated to have been $\frac{1}{2}$ f. higher than the previous day's closing rate, which was evidently $84\frac{1}{2}$ f.

"*Forward francs were generally quoted at about par.*" This statement means that the rate for francs for future delivery was approximately the same as the rate for "spot" francs.

"*Other Continental gold exchanges showed small rises, the Belgian closing at 23·76 $\frac{1}{2}$ b., the Dutch at 8·18 $\frac{1}{2}$ fl. and the Swiss at 17·11 f.*" The term "Continental gold exchanges" refers to those European currencies which are functioning on the gold standard. We are told that all these rates rose, i.e., that the currencies concerned declined in value as compared with sterling.

"*A further advance to 18·35 kr. occurred in the Swedish exchange, and the Oslo rate was also higher at 19·43 $\frac{1}{2}$ kr.*" These rates also rose, denoting a fall in the values of the currencies concerned in terms of sterling.

"*Japanese yen were a little dearer at 1s. 3 $\frac{5}{16}$ d.*" Since the rate for Japanese yen is quoted in sterling, the fact that yen were dearer implies that the rate rose from some lower figure to that quoted, and that yen had become relatively more valuable in terms of sterling.

"*China silver exchanges were slightly easier at 1s. 3 $\frac{1}{2}$ d. for Hong-kong and 1s. 8 $\frac{1}{2}$ d. for Shanghai.*" The fact that the silver exchanges were "easier" implies that silver currencies were cheaper in terms of sterling. The rates will therefore have fallen from those ruling on the previous day.

"*The Argentine exchange was again lowered, being quoted at 42 $\frac{15}{16}$ d., sellers.*" This statement implies that, for at least the second day in succession, Argentine currency depreciated in terms of sterling. At the close of business, pesos were offered for sale at 42 $\frac{15}{16}$ d. per gold peso, but apparently no buyers were forthcoming at this rate.

RATES OF EXCHANGE AT FOREIGN CENTRES.

The following tables of the rates of exchange quoted in foreign centres are taken from *The Economist* and from foreign newspapers. They are reproduced here to convey some idea of the foreign method of quoting exchange rates and also to permit of their comparison with the lists of London quotations already considered.

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In most cases the lists are self-explanatory, but where necessary a slight explanation of the meaning of the rates is appended.

In the French Course of Exchange the first column explains the meaning of the rates, and a perusal of this will show that the French method of quoting is a fairly homogeneous one, the principle being adopted of giving the value in francs and centimes of 100 units of the foreign currency, except for London, whereon the rate is quoted per £1 sterling, for the reason that the £ is such a large unit as compared with the franc.

THE PARIS COURSE OF EXCHANGE.

(*Le Temps*, 26th February, 1934.)

Parités-or.	Devises.	Derniers cours officiels.	Clôture de la semaine précédente.
1 livre 124 21	Londres	77 45	78
100 dollars .. 2552 38	New-York	1,524 75	1,534
100 marks 608 01	Allemagne	—	—
100 pesos 1083 48	Argentine	—	—
100 belgas 354 90	Belgique	354 25	354
100 milreis 305 34	Brésil	—	—
100 cour. 684 02	Danemark	—	345
100 pesetas .. 492 49	Espagne	205 75	205 625
100 marks 64 28	Finlande	—	—
100 florins 1025 95	Hollande	1,022 75	1,021 75
100 pengée 446 41	Hongrie	—	—
100 lire 134 34	Italie	130 85	133 55
100 cour. 684 02	Norvège	387 50	386 50
100 zlotys 286 33	Pologne	286 50	286 50
100 cour. 75 62	Prague	63 10	—
100 lei 15 27	Roumanie	—	15 15
100 dinars 44 95	Yougoslavie	—	—
100 cour. 684 02	Suède	402	403
100 francs 492 49	Suisse	490 75	490 625
100 schilling .. 359 15	Vienne	—	—

The rates quoted in the Paris Course of Exchange are for telegraphic transfers, or for cable remittances, as in the case of the London Exchange table. The quotations, which are given for the previous day and for the last business day of the previous week, are, in each case, the *official* rates for the date in question.

The table on page 189 is adapted from the *Berliner Tageblatt*, of 24th February, 1934.

This table is most instructive in that two sets of rates are given, one for *devisen*, i.e., exchange expressed in the form of bank credit

BERLIN TABLE OF OFFICIAL EXCHANGE RATES.

(Berliner Börse, Sonnabend, 24. Februar.)

Bank Abkürz.	DEVISEN.				BANKNOTEN.				Explanation of Rates.
	24. Od.—24. Br.	23. Od.—23. Br.	24. Od.—24. Br.	23. Od.—23. Br.	24. Od.—24. Br.	23. Od.—23. Br.	24. Od.—24. Br.	23. Od.—23. Br.	
4	Deutschland ..	2,523	2,522	2,528	2,47	2,475	2,49	2,475	Reichsmark per Dollar
14	Amerika ..	12,517	12,523	12,815	12,78	12,74	12,79	12,80	„ \$1
3	England ..	12,775	12,905	12,785	12,73	12,74	12,79	12,80	„ 100 Florins
24	Holland ..	168,63	168,97	169,12	168,78	168,36	168,89	169,04	„ „
6	Argentin ..	0,648	0,652	0,648	0,652	0,643	0,643	0,643	„ „
34	Norwegen ..	64,19	64,31	64,24	64,36	64,02	64,28	64,07	„ 100 Kronor
24	Dänemark ..	57,04	57,16	57,09	57,21	56,79	57,01	56,84	„ 100 Kronor
64	Island ..	57,79	57,91	57,84	57,96	57,01	57,23	57,06	„ 100 Kronor (Icelandic)
24	Schweden ..	65,83	65,97	65,88	66,02	65,87	65,93	65,72	„ 100 Kronor
34	Belgien ..	58,44	58,56	58,44	58,56	58,28	58,52	58,52	„ 100 Belg.
24	Italien ..	21,69	21,72	21,87	21,91	21,56	21,84	21,83	„ 100 Lire
3	Frankreich ..	16,49	16,53	16,49	16,53	16,45	16,51	16,51	„ 100 Francs
2	Schweiz ..	80,87	81,03	80,84	81,00	80,89	81,01	80,98	„ 100 Francs
6	Spanien ..	33,97	34,03	33,97	34,03	33,83	33,97	33,97	„ 100 Pesetas
7	Brasilien ..	0,214	0,216	0,214	0,216	—	—	—	„ Milreis
64	Japan ..	0,757	0,759	0,764	0,766	—	—	—	„ Yen
6	Kanada ..	2,502	2,508	2,507	2,513	2,465	2,465	2,47	„ Dollar
7	Uruguay ..	1,299	1,291	1,290	1,291	—	—	—	„ Dollar (Uruguayan)
34	Tschechien ..	10,39	10,40	10,39	10,40	10,08	10,12	10,12	„ 100 Kronen
44	Finnland ..	5,639	5,651	5,644	5,656	5,615	5,615	5,62	„ 100 Marks (Finnish)
64	Estland ..	68,66	68,82	68,78	68,92	—	—	—	„ 100 Estonian Kronen
6	Litauen ..	79,92	80,80	79,92	80,98	—	—	—	„ 100 Lita
6	Lettland ..	42,11	42,19	42,11	42,19	41,97	42,13	42,13	„ 100 Lita
54	Portugal ..	11,63	11,65	11,64	11,66	—	—	—	„ 100 Escudos
7	Bulgarien ..	3,047	3,053	3,047	3,053	5,33	5,37	5,37	„ 100 Leva
7	Jugoslaw ..	5,664	5,676	5,664	5,676	—	—	—	„ 100 Dinars
6	Oesterreich ..	47,20	47,30	47,20	47,30	—	—	—	„ 100 Schillings
44	Ungarn ..	81,70	81,70	81,86	81,86	—	—	—	„ 100 Schillings
3	Dänzig ..	1,995	1,999	1,995	1,999	81,84	81,84	81,84	„ 100 Gulden
7	Türkei ..	2,396	2,40	2,396	2,40	1,96	1,96	1,96	„ 100 Piastres
7	Griechenland ..	13,185	13,185	13,185	13,185	—	—	—	„ 100 Drachmas
7	Aegypten ..	2,492	2,492	2,492	2,492	—	—	—	„ 100 Piastres
6	Rumänien ..	2,496	2,492	2,496	2,492	—	—	—	„ 100 Lei
5	Polen (Warsch.) ..	47,20	47,40	47,20	47,40	47,00	47,40	47,40	„ 100 Zloty

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(i.e., T.T.), and the other for bank notes, the latter rates being lower in every case than the former, for reasons already explained (see *ante*, p. 123).

As is now customary in London, the bank rates ruling in the foreign centres are given, whilst the exchange rates quoted are those for the two previous days. The two columns for each day, headed respectively "*Gd.*" and "*Br.*" (meaning *Geld* and *Brief*), refer to the *buying* and *selling* rates, respectively. The rates in the column headed *Geld* (the buying rates) will be found in each case to be lower than those in the *Brief* column, which is in accord with the slogan "Buy Low, Sell High", when rates are quoted in home currency to the foreign unit.

NEW YORK RATES OF EXCHANGE.

28th February, 1934.*

New York on—		Par Level.	Rate, Mar. 1, 1933.	Rate, Feb. 14, 1934.	Rate, Feb. 21, 1934.	Rate, Feb. 28, 1934.
London						
60 days			3.4035	5.0187	5.0737	5.0612
Cable	Dollars for £1	4.8666	3.41	5.0350	5.09	5.0650
Cheques			3.41	5.0350	5.09	5.0650
Paris	Cents for 1 franc	3.918	3.9487	6.5250	6.55	6.5750
Brussels	Cents for 1 Belga	13.90	14.08	23.10	23.20	23.30
Switzerland	Cents for 1 franc	19.30	19.54	32.02	32.10	32.25
Italy	Cents for 1 lira	5.263	5.115	8.70	8.66	8.58
Berlin	Cents for 1 mark	23.82	23.90	39.10	39.50	39.62
Vienna	Cts. for Austrn. shlg.	14.07	—	18.80	18.85	18.95
Madrid	Cents for 1 peseta	19.30	8.35	13.42	13.47	13.57
Amsterdam	Cents for 1 guilder	40.12	40.44	66.70	66.95	67.15
Copenhagen			15.28	22.50	22.75	22.94
Oslo	Cents for 1 kroner	26.80	17.53	25.36	25.60	25.80
Stockholm			19.15	26.00	26.25	26.15
Athens	Cents for 1 drachma	1.29	0.564	0.924	0.94	0.944
Montreal	Cents for Can. \$1	100	83	100	100	100
Yokohama	Cents for 1 yen	42.85	20.70	22.95	30.10	29.95
Hong Kong	Cents for H. Kong \$	—	—	—	—	—
Shanghai	Cents for 1 Shng. tael	—	—	—	—	—
Calcutta	Cents for 1 rupee	36.50	25.80	38.00	38.60	38.30
Buenos Aires	Gold pesos for \$100	103.65	—	—	—	—
Rio de Janeiro	Cents for 1 milreis	11.96	—	—	—	—
Valparaiso	Cents for 1 peso	12.125	—	—	—	—

* *Economist*, 3rd March, 1934.

The table given above is that published by the *Economist* to show the rates of exchange quoted in New York on various centres. The rates are all for cheques, except in the case of the London rate, for which three forms of remittance are specified. The cheque rate and the cable rate are identical, and dearer than the 60-day rate, as more dollars are demanded for each £ payable in London by cheque or cable transfer than for each £ payable in 60 days.

New York Exchange tables frequently include other rates. Thus the table reproduced by *The Times* gives rates on London for "grain

bills at sight " and also for " Seven Day bills ", while Paris, Amsterdam and Berlin are quoted " Short sight ", a term which is explained on page 122.

The third column gives the Mint Par values with gold standard countries, and a comparison of the rates with these values will indicate whether the exchange is favourable or not to the United States. No par is quoted with the silver standard countries, for the reason already given.

The rates for three weeks, and also for the corresponding period of the previous year, are given for comparison, but it will be noted that one rate only is included in respect of each date, that being the closing or " marked " rate on the date indicated.

All centres except London and Buenos Aires are quoted in the same way, the values being given in cents per foreign unit, i.e., the majority of the quotations are *fixed, certain* or *direct*; they are all *dollar* quotations.

The London quotation is likely to remain as it is for two reasons: (a) because the £ is rather a large unit, (b) to facilitate comparison with the rate quoted in London.

Although the methods of quoting which are general in foreign centres are easier for the layman to understand, the business of the foreigner is complicated by the fact that any centre in the currency of which he is dealing has usually an entirely different method of quoting from that ruling in his own centre; each quotes in terms of its own currency. Hence, it is continually necessary for him to calculate or to refer to tables of " parity rates ". The London dealer escapes this difficulty, for nearly all foreign quotations on London are expressed in the same way as the London quotation.

DOMINION RATES OF EXCHANGE.

The two tables on page 194 show the rates between London and the Union of South Africa, Rhodesia, the Commonwealth of Australia and the Dominion of New Zealand, where the standard coins—sovereigns—are precisely the same in weight and fineness as those of the Mother Country. The Mint Par in all cases is therefore £1 = £1, and consequently the London exchange rates on each of these countries are quoted in terms of so many Dominion pounds per £100 English. The rates quoted in the Dominions on London are expressed in the same fashion.

As some difficulty is frequently experienced in understanding why any fluctuations should occur when the exchange is quoted in terms

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of pounds for pounds, it may be stated that the possession of £100 in *London* by an Australian, for instance, does not by any means imply the possession of £100 in *Australia*. Even if there were no other factors involved, it is obvious that money "here and now" is bound to be worth more than the same amount of money ten thousand miles away, for one thing because, if we assume that the money concerned is gold, there is considerable trouble, expense and risk involved in moving gold all the distance from Britain to Australia. In fact, what is sometimes referred to as the "geographical factor" is of considerable importance in connection with the Australian exchanges, as it is with those of New Zealand and South Africa.

Actually, the money circulating in Australia and in England consists for the most part of Bank notes; but even if these notes were interchangeable, and were legal tender in either place, the rate of exchange might still vary from parity, because of the expense (chiefly the loss of interest) involved in transferring the notes from one place to the other. For rates of exchange, after all, represent the price of "rights to notes, or other currency" in a foreign centre. In such circumstances, the limits to which the exchanges *could* fluctuate would be set by the cost of transmitting the notes.

But it must be remembered that the notes of England and of Australia are *not* interchangeable. Notes of the Bank of England are not legal tender in Australia, nor are Australian notes legal tender here. From an exchange standpoint, the two currencies are just as different as are pounds and francs; and, like the exchanges between France and England, or between England and the United States, they fluctuate according to conditions of demand and supply and are greatly influenced by the state of trade. Moreover, when both countries are on the gold standard, limits to the fluctuations are set by the gold-points, just as they are between any two other gold currencies.

On the other hand, the exchanges between London and Australia, New Zealand and South Africa, differ markedly from most other exchanges because the exchange mechanism of those Dominions is mainly in the hands of the Dominion banks, which have offices in London and meet the demands for remittances to and from Britain out of the supplies of funds at their disposal in London and in the Dominion concerned. Thus the Australian banks in London sell remittances on Australia which are paid out of their balances in that country, while their various branches in the Dominion sell remittances on this country which are paid out of the balances in the hands of the London offices. Conversely, British claims on Australia are

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purchased by the London offices of the Australian banks, and the collected proceeds of these claims in due course increase the balances at the disposal of the banks in Australia.

The banks operating in each of the Dominions work in the closest association in regulating the exchanges between London and the Dominion concerned. Thus the rates between Australia and London are fixed by the Commonwealth Bank of Australia, in association with the trading banks, while the London rates are usually altered by the Association of Australian Banks in London to correspond with any changes made on the other side. The rates between New Zealand and London have, in the past, been fixed by the six trading banks in collaboration with the Government, but it is likely that the Government's functions in this regard will, for the future, be taken over by the recently established New Zealand Central Reserve Bank. The rates between London and South Africa, and *vice versa*, are fixed by agreement between the three leading banks, viz., the Standard Bank of South Africa, Barclays Bank (Dominion, Colonial and Overseas) and the Netherlands Bank (see *post*, page 202).

In the short run, the banks concerned fix the rates at quite arbitrary levels to suit their own convenience, though, *in the long run*, the rates have to bear some relation to economic conditions. The Dominion exchanges are therefore not "free", as are the majority of other exchanges in the normal exchange market, to be determined by daily and hourly conditions of demand and supply; on the contrary, the Dominion rates may remain for months at the levels fixed by the banks, even though conditions may have justified a change since they were last altered.

On the other hand, the arbitrary control of the Dominion exchanges tends to prevent the violent fluctuations which would otherwise be bound to occur by reason of the fact that, as the Dominions are primary producers, their trade varies markedly according to the seasons. Australia, for instance, exports chiefly wool and grain, which are usually shipped between the months of October and February, and are mainly paid for through the Australian banks in London, so causing a demand for Australian currency as against other currencies, and an accumulation of funds in the hands of the Australian banks in London. Unless they exercised some control of the exchanges, therefore, the banks would find themselves with a large part of their funds tied up in London just at the time when their resources in Australia were being taxed by the great demands for currency for the wool clip and the harvests, and by the heavy demand for loans to finance the exports

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OVERSEAS DOMINION RATES.

COMMONWEALTH OF AUSTRALIA AND DOMINION OF NEW ZEALAND.

(From *The Economist*.)

	London on Australia and New Zealand.				Australia and New Zealand on London.*			
	Buying.		Selling.		Buying.		Selling.	
	Aus- tralia.	New Zealand.	Aus- tralia.	New Zealand.	Aus- tralia.	New Zealand.	Aus- tralia.	New Zealand.
T.T.	—	—	125	124½	125	—	125½	125
Sight	126½	126	125½	124½	124½	124	125½	124½
30 days ..	127½	126½	—	—	124½	123½	125½	124½
60 days ..	127½	127½	—	—	124½	123½	125½	124½
90 days ..	128½	127½	—	—	124½	123½	125	124½

* All rates (Australia and New Zealand) now based on £100 - LONDON.

SOUTH AFRICAN EXCHANGE RATES.

(From *The Economist*.)

(BUYING RATES PER £100 STERLING.)														
			T.T.		Sight.		30 Days' Sight.		60 Days' Sight.		90 Days' Sight.			
London on:—			£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Rhodesia ..			100	5	0	100	17	6	101	7	6	101	17	6
South Africa ..			100	17	6	101	7	6	101	17	6	102	7	6

(SELLING RATES PER £100 STERLING.)											
						Sight.		Telegraphic.			
London on:—						£		s.		d.	
Rhodesia						99		15		0	
South Africa ..						99		17		6	

of wool, meat and grain. South Africa's position is much the same, for in the late summer months she harvests and exports large quantities of wool, cereals and fruit, and so accumulates large balances in London and other world centres.

For these reasons, the Dominion banks, like the banks in all other countries which have a seasonal produce and exchange movement (e.g., the United States and the Argentine), even out the position by *anticipatory operations*, as, for example, by letting their London balances fall to a low ebb during the slack season in the sure knowledge that they will be able to replenish them from the heavy offerings of sterling when the export trade is in full swing.

Even so, however, it usually happens that, during the export season, the Dominion banks which are accumulating funds in London are faced with the problem of getting the money home, and this means that they are more anxious to make payments out of their London funds against money handed to them in the Dominions, than they are to make payments in the Dominions against sterling paid to them in London.

Similar conditions arise if one of the Dominions borrows heavily in this country and considerable amounts are placed to her credit at the London offices of her banks. Again the balances in this country are increased, whereas the funds raised may actually be required for payments within the Dominion, and there is a consequent drain on the banks which it is difficult to meet. The rates on the Dominion therefore tend to a premium, and it will be realised that, if heavy borrowing on foreign markets coincides with the accumulation of large surplus funds abroad in consequence of a favourable trade position, the difficulties of the banks in dealing with the transfer of funds become extremely pronounced.

It will be seen, therefore, that the rates at which remittances are bought and sold by the banks depend on the relation between the amounts of their balances in London and their balances in the Dominion concerned, for apart from the fact that the banks endeavour to employ their funds to the best advantage, they consistently aim at keeping adequate but not unduly large balances at either end and particularly at not accumulating too great balances in London. Consequently, if the Australian banks, for example, have accumulated large balances in London which they wish to transfer to the Dominion, they endeavour to discourage an increase in those balances (and to discourage payments out of their cash resources in Australia) by charging higher rates for remittances to Australia, i.e., the Australian exchange *tends* to a *premium*, though if there should be a heavy demand for money in London, and consequently high interest rates, it is possible that the desire of Dominion banks to obtain funds to lend in the London Market will counteract the premium on Dominion funds which would otherwise be created by the offerings of sterling, and so drafts on the

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Dominions will possibly be issued in London at par or at only a small premium.

On the other hand, the banks will show their eagerness to *buy* claims on Australia by offering better prices therefor, i.e., they may offer £102 in London for a £100 claim on Australia, for the purchase of such a claim, whether it exists as a bill or otherwise, enables them to get rid of a part of their London balances and at the same time to increase their Australian funds with the collected proceeds. For the same reason banks in the Commonwealth will *sell* exchange on London more cheaply, i.e., they may offer to pay out £102 in London against payment of only £100 in Australia, for such a transaction enables them not only to increase their funds at home but also to get rid of a portion of their surplus London balances. Similarly, they will endeavour to lessen the drain on their resources at home and to avoid adding to their London balances by increasing the discount (i.e., lowering the prices) at which they will *purchase* produce bills on London from the exporters. Reverse conditions would naturally apply if the London balances of these banks were to be unduly depleted.

While the rates on the Dominions are thus fixed by the banks, it must be understood that, when both Britain and the Dominions are on the gold standard and gold exports between them are unhindered, the expense of moving gold imposes limits to the rise and fall of the exchange, for, though bullion movements also are in the hands of the banks, they cannot usually demand more or offer less for remittances than traders would pay and receive respectively if gold remittances were made. At the time of writing, the gold standard is suspended in Great Britain and in all the Dominions, so that there is, of course, no limit to the possible extent of the fluctuations of the exchanges. (See Chapter XX.)

As all the Dominion rates are fixed from time to time by agreement between the banks who are "in the ring", the fluctuations are by no means as frequent as in most other cases. Normally, the fluctuations which do occur are due to the seasonal influences, the rates in London tending to fall in September and October in consequence of the great movement of crops, and to rise in April when the excess of Dominion exports gradually diminishes, i.e., the exchanges move in favour of the Dominions in the autumn and move against them in the spring.

Exchange Quotations between London and the Dominions.—The rates quoted in the tables on page 194 should now be easy to understand. The figures quoted represent the buying and selling prices at which the Dominion banks are prepared to deal in the currencies

indicated. *The London rates on the Dominions apply to every type of transaction (large or small) and to every type of customer. They are not varied either for large transactions or for dealers in the London Foreign Exchange Market* (as is sometimes erroneously stated), though for very small transactions (e.g., of £100 or less) a commission charge may be made by the banks over and above the exchange rate, while a small commission upon *sales* of Australian exchange is allowed in London to anyone recognised as a banker. In the case of the rates quoted by the Dominions on London, small concessions are made in certain circumstances to large regular remitters.

In general, the difference between the buying and selling prices for the same type of remittance represents the operating bank's margin for profit, out of which it must, of course, make allowance for any expenses which are not passed on to the customer.

From the tables it will be seen that the London rates on Australia and New Zealand are *at a discount* (i.e., the Australasian currencies are cheaper than sterling, and £100 sterling purchases *more* than £100 Australasian currency), whereas those Dominions quote London *at a premium* (i.e., sterling is dearer in terms of the Australasian currencies, and *more* than £100 Australasian currency must be given for £100 sterling).

In the case of South Africa and Rhodesia, the London *buying* rates are at a discount, whereas the *selling* rates are at a slight premium, i.e., London bankers in selling South African or Rhodesian pounds were willing to give less than 100 of them per £100 sterling.

Spreads.—In respect of each of the Dominions, rates are quoted for several kinds of remittance, the dearest rate in every case being that for T.T., which is the basic rate. The difference, or "spread", between this and the other rates depends mainly on the amount of interest which must be taken into account before the longer dated remittances fall due for payment, *plus* a small allowance for commission for handling documents in the case of bills for 30 days and upwards. In practice, nearly all T.T. transactions are "clean" whereas the majority of other transactions are documentary.

In the case of the *buying* rates for bills, either in London or in the Dominions, the interest taken into account is the *overdraft rate ruling at the other end*, on the principle that the Bank is out of its money until the bill is paid. The *selling* rates on each side are, however, based on the *deposit rates ruling at the other end* (e.g., the London selling rates on Australia are based on the deposit rates ruling in Australia) on the principle that the Bank must allow the buyer of a

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draft interest for the use of his money until the draft falls due for payment.

Naturally, the banks do not allow as high a rate of interest in buying as in selling, and the difference may be compared to the difference between the rates at which the English joint stock banks lend and the rates at which they borrow. When the Dominion banks in London *buy* bills they, *in effect*, make advances of sterling against future payments in the Dominion, and so they require a high rate of interest which is comparable with that on other forms of bank advances; on the other hand, when they *sell* bills, they receive sterling from their customers and, like all bankers, allow them only a low rate of interest for the use of it.

In the case of *sight drafts* and *cheques*, the interest is calculated for the "mailing period", i.e., the period which must elapse before such instruments can be presented for payment, whilst in the case of *long bills*, the period to be taken into account will be the period for which the bill is drawn in the case of "after date" bills, with the addition of the mailing period in the case of "after sight" bills.

Whilst interest is the main factor determining the spreads between the rates of exchange charged by the Dominion banks for different classes of remittance, it is by no means the only factor, as is indicated at once by the fact that the rates of exchange may remain unchanged although interest rates may have moved to an appreciable extent. As the exchange mechanism is a monopoly of the banks, it is only to be expected that they will, so far as is possible, charge whatever rates the Market will bear, and that they will fix the rates largely in accordance with domestic factors which are not made public.

Actually the rates which are charged by the banks are a frequent subject of complaint amongst traders, and, at times, large business houses have sought to avoid dealing with the banks by making their own private arrangements for transferring funds to and from the Dominions. In general, however, the banks have been able to make such traders "toe the line" by resorting to retaliatory measures, as, for example, by charging special commission on current account entries arising from such "bootleg" exchange operations. It is difficult to say that the banks are not justified in this action, because it has to be remembered that the ability of outside agencies to transact exchange business depends on their monetary position from time to time, whereas the banks stand ready to make exchanges *at any time* and *to any amount*,—at times which are convenient to them and at times which are highly inconvenient. It is reasonable, therefore, that

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traders who expect exchange facilities from the banks when things are difficult should give the banks such business as is going when the financial machine is operating smoothly.

All this serves to show that the Dominion rates of exchange, for term transactions especially, are largely arbitrary: in fixing the rates the banks necessarily take interest into account, but they also consider many other factors, and, in particular, the general trade position and their view of the future trend of monetary affairs in the Dominion concerned and in London. With these facts well in mind, we may now turn to a more detailed consideration of the rates quoted on page 194.

London Rates on Australasia.—Taking first the *London rates on Australia*, we see that the Australian banks in London were offering to sell T.T. on that country at £125 Australian per £100 British, and that they would sell sight drafts on Australia at £125½ Australia per £100 sterling paid in London.

LONDON ON AUSTRALIA.

	Buying.	Spread.	Selling.	Spread.	Margin for Exchange Profit.
T.T.	(126)		125		1
Sight	126½	½	125½	½	1½
30 days	127½	1½			
60 days	127½	1½			
90 days	128½	2½			

Thus the difference between the rate at which the banks in London would sell T.T. on Australia and the rate at which they would sell sight drafts (i.e., the spread between the T.T. and sight rates) was $\frac{1}{4}$ per cent in favour of the buyer; i.e., for each £100 paid in London, the Australian banks would pay out in Australia £½ more in the case of a sight draft than they would pay in the case of a T.T. If we ignore special factors and any commission which may be included, this difference represents the allowance which the banks were willing to make the purchaser of a sight draft for the right to use the money paid by him during the time which must elapse between his payment of sterling in London and the payment of the sight draft in Australia. In brief, the bulk of the difference represents an allowance of interest on the purchase money for the "mailing period", which, as between London and Australia, is about 28 or 29 days. If we take this roughly as 30 days, we see that the allowance amounts to approximately $\frac{1}{4} \times \frac{365}{30} \times \frac{100}{125}$, i.e., about

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2½ % per annum on the £125 Australian to be paid out by the Dominion banks.

In the case of New Zealand, the spread between the selling rates for T.T. and sight drafts is also ½ %, and the same conditions apply.

The next point for notice is that the banks in London do not quote any rates for selling *long bills* on Australia or New Zealand, though rates for the *purchase* of such bills are quoted in the adjoining column. The principal reason for this is that, although long bills are drawn by traders on this side and are either sold to the banks or sent through them for collection, the banks themselves are rarely, if ever, asked to sell long bills on the Dominions, whereas the banks in the Dominions not only buy quantities of bills drawn on London but also themselves draw and sell such bills.

Turning now to the *buying* rates quoted by the London banks, we note first that no rates are quoted for T.T. The reason for this is that the banks are rarely asked to *buy* T.T. on the Dominions, as such transactions emanating from London are very limited, and, if the banks are offered such business, they quote for it on the basis of the Dominion rates for selling T.T. *on London*, the London offices of the Australasian banks taking the view that such transactions should be controlled from Australasia.

As the *Australian* selling rate for T.T. on London is 125½, we may assume for purposes of illustration that on the date of the table the *London* rate for buying T.T. on Australia would be about £126 Australian per £100 sterling, i.e., approximately 1 % above the London selling rate, the difference representing the banks' margin for exchange profit. On this assumption, the difference between the *buying rate* for T.T. and that for sight drafts would be £½ per £125 or ½ %. Taking the mailing period as 30 days, the difference represents a spread of about 5 % per annum, comprising mainly the interest which the banks would expect the seller of a sight draft to allow them for being out of their funds for about 30 days, the time which must elapse before the sight draft is presented and paid in Australia. In accordance with what has been stated, this rate of interest is about twice the rate involved in the spread on the selling side.

Next, it will be observed that the spread on the buying side between the sight rate and the 30-day rate was ½ %, or ½ % more than the assumed spread between sight and T.T., while the spread between 30-day and 60-day, and that between 60-day and 90-day, are also ½ %. This additional allowance of ½ % demanded by the banks does not represent interest (that, of course, will be the same,

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since the period—30 days—is approximately the same) but is doubtless taken by the banks to cover (a) their trouble in handling documents, (b) the increased risk involved in a long bill, and (c) the heavier stamp duty on a long bill.

Australasian Rates on London.—From the tables it will be seen that the *Australian* banks were buying sight drafts on London at $24\frac{1}{2}$ % premium, i.e., at £124 15s. Australian per £100 sterling, whereas their buying rate for T.T. was £125, which (again ignoring other factors)

AUSTRALIA ON LONDON.

	Buying.	Spread.	Selling.	Spread.	Margin for Exchange Profit.
T.T.	125	$\frac{1}{8}$	125 $\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
Sight	124 $\frac{1}{2}$	$\frac{1}{8}$	125 $\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
30 days ..	124 $\frac{1}{2}$	$\frac{1}{8}$	125 $\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
60 days ..	124 $\frac{1}{2}$	$\frac{1}{16}$	125 $\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{16}$
90 days ..	124 $\frac{1}{2}$	$\frac{1}{16}$	125	$\frac{1}{16}$	$\frac{1}{16}$

gives a spread of $\frac{1}{8}$ % to cover the interest lost by the banks between the date on which they would pay out cash in Australia and the date on which the drafts would arrive in London for collection, i.e., the "mailing period".

On the same date the spread between sight and 30 days' rates was also $\frac{1}{8}$ %, representing an allowance for one month's interest on £125 Australian at about $2\frac{1}{2}$ %, the discount rate ruling in London. Between 30 days and 60 days and between 60 days and 90 days, however, the spread was only $\frac{3}{16}$ %, the smaller allowance presumably being due to the fact that the Dominion banks were anxious to obtain such bills.

From the tables it will be seen that there are similar "spreads" between the Australasian banks *selling* rates for the different types of remittances on London.

On the buying side, the spread of $\frac{1}{8}$ per £125 between T.T. and sight is equal to $\frac{1}{8}$ %, which, for 30 days, represents (if we ignore any other factors) $2\frac{2}{3}$ % per annum (the London discount rate) on the funds invested by the banks in the bills. On the selling side, the spread between T.T. and sight is $\frac{1}{8}$ per £125, or $\frac{1}{10}$ %, representing the interest (at $1\frac{1}{5}$ %) which the banks in Australia would allow the buyer of a sight draft, indicating again that the banks will not allow interest at

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as high a rate as they expect to receive, and that they ordinarily obtain an interest profit in addition to their exchange margin.

Between each other pair of remittances on the selling side the spread is the same (viz., $\frac{1}{2}$).

South Africa and Rhodesia.—A consideration of the spreads between the various London rates on South Africa and Rhodesia serves to show how arbitrary the Dominion rates really are. It will be seen, for instance, that the banks quote the same rates for selling sight bills on both countries as they do for selling T.T., though in a free market it would seem most likely that the sight rate would be cheaper by an allowance for interest for the mailing period between London and the country concerned. Again, the difference between the buying rates for T.T. and for sight drafts is exactly the same (i.e., 10s.) as the difference between sight and 30 days, 30 days and 60 days, and 60 days and 90 days; whereas it seems likely that, in a perfectly free market, *relatively* dearer rates would be quoted for long bills as compared with sight drafts to cover the greater degree of risk and the slightly higher stamp duty.

On the basis of interest alone, it would seem, too, that, as the mailing period between London and South Africa is about twenty days at the most, the margin between T.T. and sight should not ordinarily be the same as the margin between sight and 30-day bills, because, in the latter case, more interest would have to be taken into account than in the former case. The banks have, however, to take into consideration the facts that the period of twenty days may be exceeded either because a bill may be payable in the interior or because bill transactions may originate some days before the next mailing day. Hence the banks in fixing their rates have to work to a maximum period up to about thirty days.

Actually, the rates of exchange for *term* remittances between London and South Africa are fixed by agreement between the three leading banks, the Standard Bank of South Africa, Barclays Bank (Dominion, Colonial and Overseas) and the Netherlands Bank, though the basic rate, that for telegraphic transfers, is fixed by the South African Reserve Bank. In general, because of South Africa's position as the leading exporter of gold, and of London's position as the principal market for gold, the T.T. rate will depend on the price of gold in *London*, and will tend to rest at approximately the export specie point from South Africa to London. This is so because, if the rate of exchange were to stand at a *lower* figure than the export specie point, gold shipments to London would not be profitable: if the rate were

to fall below this point, it would pay the gold producers to deliver their gold to the local mint and, with the funds thus acquired, to purchase a T.T. or M.T. on London at the current rate for the purpose of remitting their profits to London (for disbursement as dividends). These purchases would of course tend to force the rate once more up to export specie point.

On the other hand, were the rate to move much *higher* than export specie point, it would be profitable for the producers, instead of paying their local expenses in gold, to ship additional gold to London and to employ the proceeds in the purchase of South African currency with which to meet their expenses. Again the effect would be to drive the rate back to the specie point.

The result of these special considerations is that the South African T.T. rate is usually remarkably stable and frequently remains unaltered for a long period. When changes do occur, they are generally of slight extent and are purely temporary in nature. The rates for term remittances are, however, dependent on other factors: relative interest rates, the state of trade, future prospects of trade and influences of a purely domestic character which must be taken into consideration by the banks in fixing the rates at which they will buy and sell bills.

Finally, we may observe that one result of Britain's abandonment of the gold standard in September, 1931, and of South Africa's attempt for some time afterwards to maintain the gold standard, was that *direct* rates of exchange were arranged between South Africa and the gold centres, Amsterdam and Paris. These rates are still fixed and quoted in South Africa, and it may be presumed that they still form the basis of a certain amount of business, but no rates are quoted in the reverse direction, i.e., by Amsterdam or Paris on South Africa.

Stamp Duties on Long Bills. -It should be carefully observed that the rates quoted by the banks for *selling* long bills on the Dominions do not include the cost of stamp duty in the place of payment: that charge has to be borne by the purchaser or by the person who receives payment of the bill from the issuing bank's correspondents. On the other hand, the rates applied by the banks in the *purchase* of long bills always include stamp duty and any other charges which may have to be incurred on collection of the bill (see Chapter VII).

Another point is that, although the tables reproduced do not quote for bills having longer than 90 days to run, such rates (e.g., for 120 days) are occasionally given, and they can, of course, always be obtained from the banks if they are required.

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CENTRAL AND SOUTH AMERICAN EXCHANGES.

Transactions on the countries in the following list of rates are not of very frequent occurrence, and the quotations (which are cabled every night from abroad) represent the current rates of exchange, *ruling in the foreign centres on London*, at which business may or may not have been done on the date of the table (13th March, 1934).

Country and Centre.	Usance.	Market Drawn On.	Par Value.		Latest Quotation.
Bolivia	(90 d's)				
La Paz		London	Pence to Boliviano ..	13.33	*
Colombia	(Sight)	London	Pesos to £1	5.00	7.17½
Bogotá	(Sight)	London	Sucres to £1	21.3325	*
Ecuador	(Sight)	London	Quetzales to £1 ..	4.8665	
Guayaquil ..	(Sight)	London	Córdobas to £1 ..	4.8665	*
Guatemala	(Sight)	London	Colones to £1	9.73	14.70
Guatemala City	(Sight)	London	Bolivares to £1 ..	25.225	16.90
Nicaragua	(Sight)	London			
Managua ..	(Sight)	London			
Salvador	(Sight)	London			
San Salvador ..	(Sight)	London			
Venezuela	(Sight)	London			
Caracas		London			

* No rates available. † Nominal. ‡ Rates calculated on basis of New York cross rates.

CHAPTER X

CAUSES OF FLUCTUATIONS IN THE EXCHANGES

SINCE the rate of exchange between one currency and another is determined, at any particular time, by the relation between the demand for and the supply of the two currencies concerned in the world's exchange markets, and, in the long run, by the purchasing power parity between the two forms of money, it follows that the factors which bring about changes or movements in the rate of exchange between two currencies must be divisible into two groups: —

- (a) The influences which have greatest effect *in the short period* because they produce changes in the daily (and even hourly) relationship between demand and supply on the Foreign Exchange Market; and
- (b) The influences which have greatest effect *in the long run* because they modify the relationship between the purchasing powers of the two currencies concerned.

For the sake of clarity, it will be advantageous to consider these factors principally by reference to the rates of exchange between London and other centres.

FACTORS WHICH INFLUENCE THE DEMAND FOR OR SUPPLY OF A CURRENCY.

In ordinary circumstances, both the demand for and the supply of a foreign currency on the London Foreign Exchange Market arise mainly from the necessity of settling *business* indebtedness between this country and the foreign country concerned, and the intensity of demand and supply, or, in other words, the *activity of the market* in the foreign currency, will depend very largely on the amount of those debts which are in process of being settled.

The aggregate amount of debts owing at any moment by two

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nations to each other is made up in several ways, but it must be made clear, at the outset, that the *total* amount due from one country to another at any particular moment has no immediate effect upon the prevailing rates of exchange. France may, in the aggregate, owe Great Britain one thousand million pounds, and Great Britain may owe France no more than the same number of pence, but, if the debts are not to be settled till this day next year, they can have no influence on the rate of exchange between Paris and London to-day, or this day next week. It is not the *aggregate* of *outstanding* indebtedness that affects the rate of exchange between any two countries; it is that portion of it which is *immediately arising for settlement*; that cumulative amount of outstanding debts of all kinds which the debtors of both countries endeavour to settle immediately by seeking means to remit.

For convenience, we will consider the various sources of international indebtedness which give rise to the daily demand for and supply of a foreign currency under the following main heads: (1) Trade Operations; (2) Stock Exchange Transactions; (3) Inter-Governmental Transfers; (4) Banking Operations; and (5) Speculative Dealings in Exchange.

TRADE OPERATIONS.

The main source from which debts arise for settlement between any two countries is the import and export of goods, and, in ordinary circumstances, the most important influence affecting the relationship between the demand for and the supply of one currency in relation to the other is the necessity for making payments for goods passing to and fro between the two countries concerned. If the debts arising for settlement between any two countries A and B resulted solely from the exchange of goods between them, then we should find that the trend of the rate of exchange between their two currencies would reflect the *direction or balance of current trade* between the two countries. If, during the first quarter of the year, A exported more goods to B than B exported to A, then A would have more claims against B than B would have against A. In country B there would be more debtors of A than creditors, and, if settlements for the goods were being made forthwith, the rate of exchange on A in B would be favourable to A and unfavourable to B. Reverse conditions would prevail if, in the second quarter of the year, B exported more goods to A than were received in exchange. In such circumstances, the

rate of exchange would move favourably to B and unfavourably to A.

But apart from the indebtedness arising from the purchase and sale of goods, debts of considerable magnitude are created between different countries in respect of a variety of *services* connected with the exchange of commodities. The movement of goods from one country to another involves expense in the form of freight, packing, and insurance; landing and warehousing charges; commission for a factor or broker who effects the purchase in the one country or the sale in the other, and, as likely as not, commission for a bank or accepting house which finances the transaction and ensures due payment for the exporter. All such items result in the creation of debts, additional to the actual selling price of the goods, which have to be paid to the country whose services are given.

The majority of debts arising in this way from services rendered in connection with the movement of goods are settled at the same time as the debts due in respect of the goods themselves. In many cases, the expenses of shipment are added by the exporter to his invoice, and thus the payments made by foreign importers ordinarily include a percentage for carriage, insurance, and other charges (see page 280). If the exporter does not charge the items separately on his invoice, he will naturally recoup himself by increasing the price charged for the goods.

Debts due for Services have the Same Effect as Debts due for Goods.—But, in whatever way the services are paid for, the important point to observe is that, so far as the foreign exchanges are concerned, it matters nothing whether debts become due to a country from the sale, or from the insurance of goods; whether payments are for money lent, or for services rendered. The demand for and supply of exchange are influenced by payments and receipts for non-merchandise items just as much as they are by payments for imports and exports of commodities.

Let us suppose, as before, that country A trades with country B, but that all the goods are carried in B's ships and that the insurance and financing of most of the shipments are effected by highly developed agencies in B. What then should we expect? Clearly, that A must pay B considerable sums on account of these various services. Indeed, we might find that, even though the quarterly balance between imports and exports, i.e., the *visible balance of trade*, is actually in favour of A, yet when the debts due for services are taken into account, the *net balance of payments* made and received between

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the two countries, or the *net balance of indebtedness*, as it is called, might very well be in favour of B. We may illustrate the position with some imaginary figures as follows:—

QUARTERLY STATEMENT OF INDEBTEDNESS BETWEEN COUNTRIES A AND B.

Due to A for—		Due to B for—	
Exports to B	£36,000,000	Exports to A	£34,000,000
Balance in favour of B	£2,500,000	Services rendered to A	£4,500,000
	£38,500,000		£38,500,000

If there were no other factors to be taken into account, the obvious result of this position would be that, in general, the debts in process of payment by A to B would exceed the debts being paid by B to A. The great majority of these debts would set-off or cancel one another, but the *balance of current payments* on trade account in favour of B would tend to influence the exchanges in her favour and adversely to A.

This statement must not be understood to imply that the rate of exchange between two countries is in any sense *determined* by the balance of trade payments or by the balance of trade indebtedness, for there are a great many other factors besides trade which influence the rates of exchange. Moreover, it must be understood that *no such thing as a balance is ever deliberately struck*. The principle of setting out the debits and credits in balance sheet form is adopted for illustration only; in practice, the settlement and setting-off go on *continuously*, and adjustment is effected automatically (see Chapters XIII and XIV). The whole point to be observed here is, that since the short-period rate of exchange is determined by the conditions of daily demand and supply, the current payments arising from trade must exert an important influence on the prevailing rates because trade is one of the main influences affecting the demand for and supply of remittances between any two countries.

Let us take the argument a step farther and consider the trade of country B, not solely with country A, but with the rest of the world. Let us suppose that B is a highly industrialised country, such as Great Britain or Germany, and that her exports consist mainly of manufactured articles and minerals which are sent all over the world in return for imports, chiefly in the form of food and raw materials.

Now suppose that B's total annual imports of goods from the

various countries of the world are much in excess of her total annual exports. What should we expect in such circumstances? Clearly, that since B will have more trade payments to make than to receive, her exchanges with other countries will tend to be unfavourable. But let us suppose, as before, that B has a great mercantile marine and is highly organised as a world financial, insurance, and investment centre, her ships carrying goods for all other nations, and her bankers, financiers, and underwriters bearing the financial burden and risk of half of the world's trade. Obviously, considerable sums must annually accrue to B in respect of these services, and those sums, if they are not paid in money, i.e., gold, or in securities, must be paid in the form of goods. In other words, the excess of B's imports of goods will represent payments being made to her for the many services rendered to other nations by her shippers, bankers, and underwriters. Whilst B's balance of trade in *goods* may be unfavourable, the net balance of *trade payments* may be considerably to her advantage, and, as a result, the direction of trade indebtedness will tend to exert a favourable influence on her exchanges.

The Demand for and Supply of Sterling on Trade Account.—This, in fact, is precisely the position so far as Great Britain is concerned, and a most important factor bearing on her rates of exchange is that much of the world's foreign trade is conducted and financed through British intermediaries, who have no direct concern with the actual goods bought and sold. Their only interest is in the commission they earn as buying or selling agents for the goods, or as carriers, or as insurers of the goods, or from financing the transactions in the capacity of acceptors of the bills drawn in respect of the goods. Consequently, in considering the influence of trade operations on the London exchanges, we have to look beyond the actual *goods* which we import and export, and consider also the payments we have to receive on account of commission, freight, and interest. Further, we must look beyond the trade conducted by the United Kingdom *on its own account*, and include in our view much of the trade of foreign countries as well.

Seasonal Trade Influences on the Exchanges.—No more conclusive evidence of the influence of the direction of trade on the exchanges can be adduced than the seasonal fluctuations which are in normal times such a marked feature of the rates of exchange between London and the great produce-exporting countries, notably the United States, Australia, Canada, South Africa, and Argentina.

As between London and New York, for instance, the position is

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that in the autumn, large payments have to be made to the United States in respect of her vast exports of grain, cotton, and tobacco to Europe. A great part of this produce is bought by and consumed in this country, and is paid for by drafts on London; but much of it goes to other European countries, and this also is largely paid for by bills on London, the foreign importers having to recoup the London acceptors (at the maturity of the bills) for the amount of the bills *plus* commission. The result is, then, that in the autumn, bills on London are plentiful and cheap in New York, and the exchange on London is in favour of the United States. But at other times of the year the tide turns, and the New York exchange is usually in favour of London. For then, owing to the large exports to the States of British manufactured goods, and to the number of bills accepted in London on behalf of U.S. importers of the products of other nations, such as tea and silk from China, and manufactured goods from Germany and other European countries, the demand in New York for bills on London exceeds the supply.

When Britain is on the gold standard this seasonal influence on the exchanges causes an "autumnal drain" of gold from London to the United States, but, over a long period of years, the drain has been so regular and well-marked in its effects that, as a rule, no alarm is occasioned by the adverse trend of the exchanges or by the large quantities of gold which usually leave for New York. On the other hand, the position can easily become serious when other factors accentuate the adverse movement of the exchanges and increase the demands for gold from London, and it is largely for this reason that Britain's great crises of the past have almost always reached their climax in the late autumn and early winter months.

If we confine our attention for the moment to the *trade* demand for and supply of sterling in the world's foreign exchange markets, we may summarise the position briefly as follows:—

Demand.—The demand for sterling abroad on trade account arises because foreign importers have to pay (1) our merchants and manufacturers for goods supplied by us; (2) our shipping and insurance companies, and brokers for the freight and insurance of the goods; (3) our merchants, brokers, accepting houses, and bankers for commission, brokerage, and interest on such mercantile business as is transacted for foreign account; and (4) other countries for goods imported from them and services rendered by them which are settled by bills and other remittances payable in London.

Supply.—The supply of sterling abroad on trade account is fur-

nished chiefly in the form of bills drawn by foreign merchants and exporters of goods to this country (1) for the shipments made to our importers, including the cost of freight and insurance; (2) for their charges for any of the miscellaneous services enumerated above, which they undertake for British account; and (3) by arrangement with London accepting houses and banks, for the purpose of making payments to other nations for goods exported and services rendered.

STOCK EXCHANGE TRANSACTIONS.

These comprise: (a) Investment, and (b) Speculation in International Stocks and Shares; (c) The Issue of Long-Period Loans; (d) Payment of Dividends and Interest, and Repayments of Capital.

Investment.—The growth, throughout the world, of joint stock companies, whose capital, divided into shares, or consolidated into stock, is freely transferable, and the institution in the chief cities of Stock Exchanges where stocks and shares can easily be marketed, have had the result that the capital of many of the world's chief corporations is held more or less internationally. An American citizen, for example, may hold a block of the shares of Vickers, Ltd., or of J. & P. Coats, Ltd., or a Frenchman may be the owner of stock in an American railway. Similarly, securities representing national debts provide a wide area for international investment.

During and immediately after the Great War there was practically no investment by British nationals in overseas securities, but in more recent years there is ample evidence that British investors, and particularly insurance companies and investment trusts, have returned to their old favourites. Each year considerable sums are being placed in American stocks and bonds, while not inconsiderable amounts pass into Continental securities.

In the other direction, we have a steady stream of sales from the London Stock Exchange to the British Dominions, which, as they become richer and more independent of the Mother Country, buy back the securities imported from them in the days of their youthful development. Furthermore, the insatiable demand throughout the world for good class, high-yielding investments has caused certain British securities, and in particular those issued by the British Government, to be specially favoured by investors in the United States and other countries.

Now, a purchase of British securities on the London Stock Exchange for foreign account, or a sale in New York of U.S. securities

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for British account, creates a debt due *to* London; a sale of British securities in London for foreign account, or a purchase abroad of foreign securities for British account, creates a debt due *from* London. In any such cases, the purchasing or investing centre *imports* share certificates, debentures, scrip or bearer bonds from the other country, and such imports have to be paid for in precisely the same way as other imports. Either the centre selling the securities offers the currency of the importing country on the foreign exchange market, or the importing centre enters the market as a buyer of the other country's currency. Thus the export and import of securities have the same effects on the rates of exchange as the export and import of goods: heavy investment by country A in the securities of country B has the same effect on the exchange rates as extensive exports, from B to A—the rate of exchange is influenced in favour of B and against A.

• **Speculation in Stocks.**—Speculation in international stocks implies chiefly the purchase of foreign stocks and shares in anticipation of a rise in their price, with no immediate intention of holding them for investment and income purposes. Action of this kind tends to be more spasmodic than investment pure and simple, and, for this reason, its effect on the exchanges is much more erratic. Very considerable movements may take place in consequence of a sudden speculative demand in one country for certain securities of another.

When stock markets are active, considerable speculative business in American stocks is transacted from London, dealings in futures and options through New York brokers being found very attractive by a section of the British public. During the summer of 1929, for instance, the stock market in New York experienced a tremendous boom and there was a remarkable rush of funds from London for investment in that centre. On the other hand, considerable sums pass from New York to London for speculative investment in British stocks and shares, particularly at times when those stocks and shares are enjoying a boom (as was the case in 1928), or when uncertainty in the States leads capitalists to favour overseas investments. There are also extensive speculative dealings between the chief European centres—London, Paris, Brussels, Amsterdam, Frankfort, Berlin and Milan—the great bulk of the transactions being, of course, effected by telegraph or telephone, as they are effected between London and New York by cable or telephone.

This aspect of internationalism is not without its element of danger. The exchange market may be suddenly and seriously dis-

turbed by the dumping abroad of large blocks of securities accumulated by a country which is for some reason plunged into a financial or industrial crisis. Moreover, "Central banks rightly fear speculation in stocks and shares as particularly dangerous to credit stability. Redundant imports of securities are more easily attracted than redundant imports of commodities, and, once imported, are more likely to remain unabsorbed in the hands of dealers or speculators." *

On the other hand, international investment and speculation are not without their advantages. The freer negotiability of national stocks and shares on an international market has beneficial effects on joint stock enterprise, while the wide distribution of the debits and credits arising from these stocks and shares over a number of countries tends to lessen the shock and minimise the danger of those industrial and financial disorders which are apparently inevitable in the modern commercial organisation.

Stock Arbitrage.—Closely allied to the speculative purchase of stocks is the form of operation known as "stock arbitrage", involving the purchase of a security on one stock market and its simultaneous sale in another at a favourable difference in price. A London dealer may get into simultaneous touch by telephone with the stock markets in Paris and Amsterdam, and may secure a quick and certain profit by purchasing such international shares as Royal Dutch Oil Ordinary in the one centre and selling them immediately in the other at a slightly better price.

Considerable business of this type is transacted between London and the important Continental centres by the London branches of foreign (and especially Continental) banks, certain large brokers, many City finance houses, and several of the joint stock banks.

The success of stock arbitrage necessarily depends on the fact that slightly different prices are quoted on the various markets for the stocks concerned. The existence of different prices is accounted for partly by the fact that the quotations are in different currencies, necessitating an exchange conversion from one to the other, partly by differences in the relation between the demand for and the supply of a certain stock at a given moment (frequently induced by varying conditions of ease and tightness of money in the respective centres), and partly by the variation in the times at which the stock markets open and close. The New York Market, for example, continues

* "The Gold Standard and the Balance of Payments," R. G. Hawtrey *Economic Journal*, March, 1926.

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business several hours after the London Market, and each morning arbitrageurs in the latter centre have opportunities for profit in the differences between the New York overnight prices and those at which the London Market opens.

But while successful arbitrage depends on price differences, its effect is to *reduce* those differences. The various centres are so closely knit by telephone and telegraph, and the competition for the business is so keen, that any profitable margin soon disappears. On the other hand, the number of arbitrage securities tends constantly to increase, while the linking up of new centres by telephone opens up new avenues of profitable operation.

Clearly, every stock arbitrage operation must have a *direct* effect on the prevailing rates of exchange, although that effect may be neutralised or obscured by other factors. If, for instance, a London operator buys securities in Paris and sells them in London, he must at the same time buy francs against sterling to pay for his purchase. His operations will, therefore, tend to strengthen the value of francs in terms of pounds and to influence the franc exchange against London.

The Issue of Long-Period Loans.—In no direction has the growth of economic interdependence been more strikingly illustrated than by the increasing extent to which the wealthier nations of the world have lent their resources for various purposes to other countries, and, in particular, to those States in need of capital for the development and exploitation of their natural resources.

In pre-war days, Britain stood unrivalled as a lending country. From the early years of the nineteenth century until 1914 a steady stream of productive capital flowed to other lands from the great reservoir of wealth which Britain had amassed through her epoch-making inventions connected with the steam-engine, railways, and textile manufacture. The savings of British investors contributed to the opening up of the gold mines of Australia and South Africa, to the development of the productive interiors of the Argentine and Brazil, to the construction of railways in India and China, to the establishment of rubber plantations in Malay, and to the planting of cotton fields in the Sudan. And happily for Britain, the outflow of capital was accompanied by an export of British machinery and manufactures, and of British skill, both of employers and of workmen. The textile and engineering industries, first of Belgium, then of Northern France, and later of Germany, owed much of their development to these exportations, while the subsequent growth of their

mining industries was largely attributable to the import of inventions which came into being during the industrial revolution in this country. On the Continent, in North and South America, in Australia, South Africa, and the Far East, railways laid and equipped with the aid of British capital and British contractors promoted still further development, and a still greater demand for British products and British capital.

Apart from assisting enterprise of a purely industrial or commercial character, British investors over a long period of years have financed foreign Governments and municipalities on a liberal scale for such purposes as the construction of docks, harbours, railways, canals, and tramways. British capital has thus been poured all over the globe, adding to the productive power of all countries and of all peoples.

Some idea of the extent of the financial assistance rendered in this way by Britain to other nations may be gauged from the fact that her aggregate overseas investments in 1914 were computed to be in the neighbourhood of £3,500,000,000, and, despite the sales of our dollar securities during the Great War, it was estimated in 1930 that our total overseas investment was scarcely affected.

After 1914, the United States of America ranged herself alongside Britain as a great loaning country. At the outbreak of war, the United States owed the world about £1,000,000,000, but the fortunate position attained by that country during the Great War enabled her not only to pay off practically the whole of this indebtedness, but also to lend the world, and war-stricken Europe especially, upwards of £4,000,000,000. Statistics for 1927 and 1928 indicate that the United States was in those years adding to this stupendous figure at the rate of approximately £400,000,000 a year, but following the world crash of 1929 and her unfortunate experience with some of her overseas loans, she has, since 1930, practically ceased to lend abroad.

The Effect of Foreign Loans on the Exchanges.—Clearly, the transfer of vast capital sums such as those indicated must have very important effects both on the distribution of world indebtedness and on the prevailing foreign exchange rates. The actual effect will depend on whether the money borrowed is spent in the lending country or in some other country.

If the proceeds of a loan are used to purchase *additional goods*, such as machinery and other manufactures, *of the lending country*, there will be no immediate effect upon the exchanges of that country, since the proceeds are distributed amongst the suppliers of the goods

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and no exchange transaction becomes necessary. Similarly, if the proceeds are used to pay off debts owing in the centre where the loan is raised, the exchanges will be unaffected.

If, however, the loan is utilised to buy goods *of a third country*, then that country is placed in the position to offer currency of the lending country on the world's foreign exchange markets, with the result that the exchanges of the lending country are adversely affected. The same result ensues if the borrowing country spends the money internally: her nationals offer currency of the lending country for sale and thus depress its price, i.e., unfavourably influence the rate of exchange.

Suppose, for example, that Brazil borrows £4,000,000 in London on the understanding that the money shall be spent in this country on the purchase of British goods—say on railway stock or on fighting ships. There will be no *immediate* effect on the rate of exchange between London and Rio de Janeiro: the effect will be indirect and spread over a period of time. Ultimately, the goods sent out of this country must be paid for, and such payment will be made gradually over a number of years in the form of interest, or spasmodically in the form of capital repayments. The effect is as if the home investor had sold goods to Brazil on credit, receiving in return interest and repayment of capital in accordance with the terms arranged by the borrowing State.

Let us suppose, however, that the money borrowed is used by Brazil to purchase goods from some other country, or that she employs the funds at home on new constructive work, such as the building of roads, harbours, and railways. If the funds are used to purchase machinery or textiles from Germany, German manufacturers obtain payment by drawing bills on London, thus increasing the supply of sterling in Berlin and influencing the German exchange against London. If the money is spent with contractors and traders in Brazil, they will naturally be paid in their own currency, but that currency will have been obtained by the responsible authority through the sale of the sterling proceeds of the loan, again influencing the exchanges against London.

Ultimately, the result in both cases is that foreigners come into possession of sterling which they will want to use. In general, they will use it for the purchase of British goods, since the increase in the supply of sterling abroad makes the pound cheaper, and thus stimulates foreign purchases of British goods whose price is expressed in sterling. In such circumstances, it pays the foreigner to turn

the sterling funds which come into his hands into locomotives, steel rails, or other commodities of which he may be in need.

The final case is where the funds borrowed are used, either directly or indirectly, to purchase gold from London; i.e., where such heavy loans are made by us to other countries that the offerings of sterling on the world's foreign exchange market forces down its value below gold export point from London and so causes gold to be sent abroad. Even so, the ultimate result will be the same. The export of gold from this country results in a contraction of credit here and a fall in prices. The lower prices encourage foreign purchases of goods from us, while the contraction of credit in this country raises interest charges and so discourages further borrowing until the exchanges move favourably and the position is adjusted. Thus, in the long run, the effect is the same as if the proceeds of the loan had in the first place been spent in this country.

"Every Foreign Loan Creates an Export."—We may say, therefore, that, unless the proceeds of a foreign loan are wholly spent in the lending country, the *immediate* effect is to influence the exchanges against the lending country and to cheapen its currency in the world's foreign exchange market. But the *ultimate* effect of every foreign loan, in normal circumstances, is that the proceeds go out of the country almost entirely in the form of goods and more rarely in the form of gold, for which reason it is often stated that "*Every foreign loan creates an export*".

We can see more easily that this is the case if we look at the matter from another standpoint. In general, foreigners borrow money from us in order to obtain rights to buy goods in this country or rights, which we possess, to buy goods in other countries. If the goods are bought in this country, there is, as we have seen, no effect on the exchanges. If we lend the borrowers rights to buy goods in other countries, those rights will usually be represented by claims against other nations which we have created by the export of our goods and services. When we lend abroad *we do not transfer our own money*, because that money, which nowadays consists principally of Bank of England notes, is ordinarily useless to a foreigner; what we *do* transfer are credits, standing to our name in other countries, which can be used to purchase goods and services from those countries.

Outstanding examples of the effect of overseas lending on the exports of the lending country can be found in the history of Britain and of the United States. In the nineteenth century, for instance, Britain's active policy of overseas lending led to a vast outflow of

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machinery and manufactures from this country to all parts of the world, and, as our markets expanded, so we had greater surpluses available for lending to other nations. Similarly, the vast loans made by the United States to other countries during the War and post-war years led to a marked expansion of her exports to other countries and consequently gave her a much wider interest in international trade and affairs.

Payment of Dividends and Interest, and Repayment of Capital.

The raising of loans tends at the time to turn the exchange against the lending and in favour of the borrowing country. But the periodical payments of interest on the loans have the reverse effect. Foreign purchases of British stocks and shares exert a favourable influence on the London rate of exchange at the time of purchase, but the periodical remittance to the foreign holders of dividends earned thereon tends the other way. Conversely, British purchases of foreign stocks, shares, and bonds adversely affect the London rate of exchange at the time of paying for them, but the influence of these transactions is wholly favourable to this country when the dividends and interest due in respect of the holdings are being received. The repayments of capital by a borrowing to a lending State have at the time of the repayments an exactly similar effect on the exchange between the countries as have the payments of interest, i.e., they tend to turn the rate of exchange against the borrowing and in favour of the lending State.

Sometimes the repayment of money borrowed is arranged by the establishment of a *Sinking Fund* in the lending country out of which some portions of the loan are paid from time to time, as, for example, by periodical drawings of bonds. In such circumstances, the borrowing country must each year remit to the lending country the agreed annual contribution to the Sinking Fund, and the effect on the rate of exchange is therefore favourable to the lender but adverse to the borrower, being on a par with any other form of repayment of capital.

British Embargoes on Foreign Loans.—The adverse *immediate* effect of heavy foreign loaning on the exchanges of the lending country received world-wide recognition during the early months of 1925, when Britain was in process of resuming the gold standard. To strengthen the exchange and prevent the depletion of our gold reserves, the Bank of England, acting in consultation with the Treasury, considered it necessary to place an *unofficial* embargo on foreign loans on the London Money Market. This step undoubtedly had the

required effect of steadying the exchange, and, in the circumstances, was possibly justified by the result it sought to achieve, and was doubtless preferable to the alternative of raising still further the Bank of England rate of discount. A similar *unofficial* embargo on foreign loans was imposed following our suspension of the gold standard in 1931.

The term "unofficial" is deliberately stressed, for when a so-called embargo exists, there is no official *prohibition* of foreign loans, but the Bank of England has sufficient power to render very dangerous any deliberate attempt to flout its wishes in this direction, and there is no financial house in the City which could hope successfully to float a loan or make an issue against the wishes of the Bank. Such active interference with foreign borrowing is not a desirable expedient for a country in the position of the United Kingdom, since it must react detrimentally on the position which London seeks to maintain as the world's foremost financial centre. But it has been justified in recent years on the grounds, first, that the amount being invested abroad tended to outstrip the surplus which the nation had available for overseas investment, and, secondly, that the capital was more urgently needed to foster internal trade and employment.

Of special importance so far as our own country is concerned is the fact that, in whatever way funds borrowed in this country are ultimately spent, Britain in the long run stands to benefit not inconsiderably from the entrepôt, financial, insurance, and shipping services which it is more than likely she will be called upon to render in connection with the movement of goods made possible by loans granted to foreign countries. It is for these reasons that economists in this country with a true appreciation of the position welcome the removal of any embargo on foreign loans.

Borrowing, Usually Advantageous, has its Limits.—The loaning of money abroad is not only advantageous to the lending country. Within limits, it also reacts to the greatest possible benefit of the borrowing State. We have observed that foreign loans tend to increase the exports of the lending country. Ultimately, they have the same effect on the exports of the *borrowing* State. When the latter pays interest or repays capital, people in the lending country come into possession of its currency, and will want to use it. Directly or indirectly, that money is spent in the borrowing country and its exports of goods are therefore increased—a movement which is also encouraged because the increase in the supply of the borrowing country's currency on the world's markets lowers the value of that currency and so stimulates the buying of goods which are purchasable therewith.

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But borrowing money has its limits. In this respect a nation is in much the same position as an individual. Borrowing can be justified only so long as the security remains good and credit is unimpaired. Too frequently, however, foreign borrowing is carried to excess, and therein lies the danger. While the *ultimate* effect of borrowing abroad is to encourage exports, the *immediate* effect is to encourage imports, since people in the borrowing country are placed in possession of currency of the lending country which they will use, as a rule, in the purchase of goods from other countries.

Now a country which imports more goods than she can properly afford, whether they are necessities or luxuries, is in the same position as an individual who spends in excess of his income. When such circumstances arise, the position requires to be most carefully watched, otherwise the nation concerned may find itself in most serious financial straits, and, unless it can in some way markedly increase its own exports, it will ultimately be compelled to take drastic steps to curtail its imports, as, for instance, by a strict restriction of luxury imports, or by the adoption of import quotas.

In recent years there have been several cases where this has been done. Brazil, Germany, Hungary, and Australia, among other countries, have reached the position where their export surplus has been insufficient to meet their debt liabilities, and they have all had to institute sweeping measures to remedy the deplorable state into which their finances had fallen as a consequence of a policy of extravagant overseas borrowing. There can be little question but that the past actions in this regard of these and other similar countries have been one of the major causes of the present world crisis. By continually borrowing, these countries have persistently postponed repayment of their debts, and have had to make heavier and heavier sacrifices and resort to one expedient after another in order to meet the services of their vast obligations. They have built up their economic and social life on borrowed money and on the entirely insecure foundations of a vast annual tribute, so that, when the great falling off in international trade in recent years made it increasingly difficult for such debtors to export to other countries, there was the inevitable result—a large number of distressing defaults in their ranks and much hostility on the part of their creditors.

Again, many international loans, as we have seen, are made not for the financing of production, but to provide funds for Governments. A large proportion of the loans made to European countries after the War fell into this category. Every such loan increases the taxation

burden of the borrowing country. Similarly, where a young country obtains loans for development purposes, there is always the risk of the process being carried so far that the interest burden will become too heavy for the country to bear without serious financial embarrassment.

We may conclude then that a country should resort to borrowing from other countries only in so far as it can hope to be able to meet the interest and other charges as they fall due, and also to pay off the capital sum loaned in a reasonable time, by the export of its own products or services.

Every foreign loan implies that the borrowing country obtains advances in the form of goods and services from the lending country, and that, *in the long run*, the interest on these advances as well as the loans themselves cannot be paid except by the transfer of other goods and services, either by the borrowing country herself or by other countries which have got into *her* debt. We can say, therefore, that, unless a borrowing country can create a surplus of exports over and above what that country requires to pay for her normal imports, her loans can never be properly repaid (*see* Chapter XIV).

Various Methods of Borrowing have the Same Result.—Although the general effect on the rates of exchange is similar in all cases, there are several ways in which loans are negotiated in one country on behalf of another. Thus China may borrow huge sums in this country by inviting applications through London financial houses for various forms of stock or bond. The proceeds are then utilised by the issue of bills or other forms of remittance against the accumulated funds, for making payments either in this country or abroad. Another method is to send bonds for sale in London, and at the same time to draw bills against the probable proceeds, selling these bills to obtain immediate capital for disbursements. When the bills fall due they are paid off out of the proceeds of the gradual sale of the bonds, which are held as security by the London accepting houses or financiers on whom the bills are drawn.

During the post-war years, loans of considerable magnitude were granted, particularly by the United States and Britain, in the form of credits made available at central banks, against which payments were made and foreign currency sold by the countries accommodated. This method was widely adopted in connection with the reorganisation of the finances of various countries after the War. Some of the credits were established with the assistance and co-operation of the League of Nations, while others were arranged between the central banks of the borrowing and lending countries.

INTER-GOVERNMENTAL TRANSFERS.

Of increasing importance in recent years have been purchases of foreign exchange made by central banks and Governments in order to effect payments in respect of reparations and war indebtedness. Before the Great War, the exchanges between the various countries of the world were a fairly reliable barometer of the state of international indebtedness, whilst the regulation of the financial forces was mainly in the hands of the central banks and the money markets of the leading financial centres.¹ Nowadays, however, Government transfers and Government operations have imparted a high degree of artificiality to the exchanges. So important have such operations become that exchange control has passed very largely into the hands of the Governments and we can say that the key to the exchange position is now more likely to be found in the Government offices than in the money markets of the world. Moreover, the strain imposed upon the mechanism of the exchanges by Government transfers was largely responsible for the virtual breakdown of international finance in the years after 1929.

The problem of these transfers in all its complexities is of such importance that the reader is referred to Chapter XX for a full description of the considerations involved. Here it must suffice to point out that every payment by one Government to another results in a demand for the currency of the recipient country and that it has, therefore, the same effect on the exchanges as that of a payment for imports from the creditor country.

BANKING OPERATIONS.

Transactions in foreign currency originating from the operations of bankers at home and abroad most powerfully affect the rates of exchange. They will be discussed briefly under the following heads: (a) The Issue of Letters of Credit, Circular Notes, and Travellers' Cheques; (b) Arbitrage Operations; (c) The Transfer of Bankers' Funds from one country to another for short-term investment, as by the purchase of bills or otherwise.

The Issue of Letters of Credit, Circular Notes, and Travellers' Cheques.—Letters of credit issued by banks in this and other countries partake of such a variety of forms, and are of such importance to the trading community, that a consideration of the utility and characteristics of the principal types must form the subject of a later chapter. At this point it is merely necessary to observe that

the issue of letters of credit ultimately results in an increase in the supply of the currency of the country of issue in the hands of foreign nationals, and, consequently, tends to influence the exchanges against the issuing country and in favour of the country wherein the letters of credit are made available. An Englishman who cashes sterling circular notes in Switzerland receives Swiss francs in exchange from the encashing agent or banker, who thereby comes into possession of English money which he must subsequently convert into his own currency. The same effect is produced when a Swiss exporter of goods to South America obtains payment by drawing bills on a London accepting house. The supply of sterling on the Swiss Foreign Exchange Market is increased, and the influence is consequently against London and in favour of Switzerland.

It should be noticed, however, that there is a considerable difference in the *ultimate* effects as between a credit issued to finance the movement of *goods*, and one which is used to cover travelling expenses. Credits issued to finance the movement of goods fall within the province of *Trade Conditions*. The issue of such a credit in London, to finance the import of goods to England, tends to move the exchanges unfavourably to us—we are paying for the import of goods. But where the credit is issued to finance goods exported, say, from Switzerland to South America, the immediately adverse effect on our exchanges is followed later by a stronger movement in our favour when the South American importer has to remit us sterling to cover the credit *and* the acceptance commission. The *net* effect on our exchanges is represented by the remittance of the acceptance commission, and the “two-way effects” arising from the actual transfer of the value of the goods do not *ultimately* affect our exchanges, as we have no payment to make or to receive for goods which do not touch our shores.

Credits issued by our banks to enable a traveller to spend money abroad exercise an immediately adverse effect on our exchanges, for here sterling is being paid out for goods sold to the traveller or for services rendered to him, and, in these cases, there is no subsequent counteracting demand for sterling. Reverse effects ensue, of course, when foreign banks issue credits encashable in this country: those banks must remit sterling to London to cover the encashments under the credits, and the exchanges are consequently influenced in our favour.

“Manufactured” or “Finance” Bills.—It frequently happens, in practice, that the offerings of a certain foreign currency in a particular market are inadequate to meet the demand. These offerings will

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consist largely of commercial bills in the foreign currency which creditors have to sell, and a little consideration will show that, if the supply is inadequate, the price of such bills, as represented by the rate of exchange, must tend to rise against the purchasers. The heavy demand may be due to a large excess of imports over exports, or to the necessity for making heavy payments to the country concerned for interest on loans or repayment of debt.

At such times, the banks with foreign connections are favourably placed to make profits in that they can supply bills specially drawn on their foreign agents to meet the demands and requirements of those who have to remit abroad. Where the banks have funds available abroad, or where they have overdraft facilities (as, of course, is nowadays always the case between banks of world importance), they can sell T.T., or M.T., or sight drafts, but, if they have no such facilities available, they will, as a rule, meet the demand by drawing long bills of exchange on their agents and correspondents.

Long bills which are so drawn or "manufactured" to meet an additional demand are known as "*Finance Bills*", since they do not arise directly from such commercial transactions as the import or export of goods, but represent *financial* operations undertaken by banks and by finance houses with the object of making profits. Thus, a banker in, say, New York may draw at 60 days' sight on his London agent, and may sell his bill in New York. In due course (usually three days before maturity of the bill) he will remit the necessary funds to his agent in London, so as to enable the latter to meet the bill when it is presented for payment.

The seasonal fluctuations in the demand for exchange resulting from the seasonal flow of trade which we have already noticed earlier in this chapter exercise a considerable influence on the drawing of finance bills. For example, sterling is usually cheap in New York during the autumn by reason of the large numbers of bills on London drawn by American exporters of produce (especially cotton, grain, and tobacco) to Europe. In May and June, however, sterling bills are scarce, and rates on London high. Consequently, during this period the banks sell finance bills at the higher rates, and cover themselves in the autumn by purchasing bills when they are cheap and remitting them to London for collection and credit of their accounts.

Even if the New York bankers do not make profits on the *rates* at which they perform these operations, they ordinarily get the use of the money realised by the sale of the finance bills for about three or four months at the London discount rate, which, under normal

conditions, is lower than that ruling in New York during the early summer months, though it tends to stiffen later on.

On the other hand, the quantity of finance bills sold in this way depends mainly on the "crop estimates", and, if the autumnal harvests turn out to be poor and exports correspondingly low, the bankers are compelled to cover their finance drawings at unremunerative rates, with the result that their anticipated profits may be converted into appreciable losses.

Much the same thing happens between the Dominions and Britain, though in this case the effect may be obscured by the operations of the banks which, as we have seen, have the exchanges almost entirely in their own hands.

From a theoretical point of view, the importance of these drawings, or this "manufacture" of bills by bankers whenever the commercial supply falls short, lies in the fact that fluctuations in the exchanges are thereby in some measure levelled out, and that the tendency to gold movements is reduced, since these bills provide an alternative form of remittance to gold. The drawing of finance bills tends to prevent exchanges from actually reaching the gold points, as the process of building up positions begins before these points are reached.

Finance bills are manufactured by the banks for many reasons other than the fact that commercial bills are in short supply. Indeed, they are drawn at any time when the banks see an opportunity of making a profit either by the transfer of funds from one centre to another where ready money can be employed more profitably, or where the drawing bank requires a temporary loan, e.g., for investment in securities offering prospects of profit or additional income. They may also be created when a bank or merchant house in the drawee country wishes to lend money abroad, or when a foreign country borrowing money in London, for instance, draws on the loan issuing house.

Many of these bills are, of course, drawn by a bank in one centre on its own branches or agencies in another, in which case any question of security for due payment would not arise; but in many cases the bills are drawn, under acceptance credits, on *other* banks and accepting houses, in which case the accepting house or bank *may* require security if it is not able to rely merely on the drawer's name. In this event, the security may consist of bonds and shares of a high-class character, or, indeed, of any other form of security which the drawees regard as satisfactory. Whether the drawees themselves are secured or not.

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bills which receive their acceptance are generally regarded as among the safest that can be dealt in, and, though not clearly arising from trade operations, are always readily taken on the Market.

It has been suggested by some authorities that the term "finance bills" should be restricted to long bills drawn by banks and accepting houses in one country on those of another, for the express purpose of raising money at an opportune moment. It would seem, however, more reasonable to include in the term *all bills drawn for the various purposes enumerated above, which represent transactions in money and credit and which are not based directly on the import or export of goods*. The latter definition covers bills which are drawn for purposes other than "raising money", as, for instance, where a bank with ample resources draws and sells a bill merely to speculate in the exchange or to take advantage of a low discount rate abroad.

For example, if interest rates in London are 4 % and in New York 6 % *p.a.*, a New York banker may arrange to draw 60 days' sight bills on his London agent at an inclusive acceptance charge of $\frac{1}{4}$ % ($= \frac{3}{4}$ % per annum), and he can negotiate such bills in New York on the basis of the rate of discount ruling in the centre on which they are drawn, i.e., at 4 %. His total cost in interest and commission on the dollars he receives by selling his bill is therefore $4\frac{3}{4}$ % *per annum*, and as he can use these dollars in his own market at 6 %, he makes a profit of $1\frac{1}{4}$ % *p.a.* He must, of course, provide his London agent with sterling to meet these drawings at maturity, but the credits under which the bills are drawn are usually renewable every two months, so that two or three days before the first bill matures he draws a fresh bill, sells it, and, with the proceeds *plus* part of the interest already earned on his original investment, he buys the necessary sterling to remit to his London agent to cover the maturing bill.

The so-called "Renewals", i.e., covering drawings by drawing afresh, have no influence on the exchange, though the drawing of the *original* bill naturally tends to move rates against the drawee country, and the purchase of the *final* remittance (i.e., without drawing afresh), which closes the series of transactions, will, of course, tend to turn the exchange in favour of the drawee country.

As stated, it is a feature of such transactions that they run on indefinitely, new bills being drawn to provide cover for the old. On the other hand, no one accepting such bills dare have more of his paper current on the market than the market can readily absorb, for any reluctance on the part of the discounters to absorb more of

a firm's paper would be damaging to its reputation; the same considerations apply, of course, in the case of the drawer.

Apart from this, it is clear that there are distinct limits, at any particular time, to the quantity and value of finance bills which can profitably be created and placed on the market. If they are drawn to meet a deficiency in the supply of commercial bills, then, when this demand is satisfied, no more will be drawn. If they are created to finance other operations (e.g., to profit by differences in interest rates), the competition of bankers to make profits will soon remove the profit margin.

Although finance bills are still drawn in considerable quantity, it may be stated that the volume of such bills drawn on London is much less than it was before the War, an important reason being that, when the Treasury found it necessary to employ the services of the London Discount Market for financing large amounts of its own bills, the banks and accepting houses agreed not to give their acceptances for any other purposes than to promote and encourage trade.

✓ **Arbitrage Operations.**—(The effect of these operations is to minimise, rather than accentuate exchange movements. The fact that a large number of skilled operators in each of the world's financial centres are watchful for any favourable difference in the rates necessarily implies that dealings are instituted as soon as the margin becomes wide enough, while the effect of the deals is either to wipe out the margin altogether or to reduce it to unprofitable proportions. The general result is to exert a levelling influence on the exchanges, cutting off the sharp edges, so to speak, and preventing acute movements, with great advantage to international trade.

Apart from their tendency to smooth out fluctuations, these operations generally result in what are known as "*sympathetic*" movements of the principal exchanges.) Let us suppose, for instance, that there is a heavy demand in Paris for sterling. The banks in Paris will sell sterling so long as their London balances last, and they will replenish those balances by the purchase of sterling trade and bank bills, maturing Treasury bills, coupons, etc. Ultimately they may find that the demand for sterling is so strong that it pays them to purchase marks, lire, or pesetas, and exchange these in Berlin, Milan, or Madrid, respectively, for rights to sterling in London.

A demand thus arises for sterling not only in Paris, but also in the other Continental centres mentioned, with the result that the chief European rates of exchange on London tend to rise together.) And just as they tend to rise together in such circumstances, so they fall

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together when reverse conditions prevail. For, in the face of a continued growth in the demand for francs in London, coupled with no increase in the quantity of francs on offer, the rate of exchange London on Paris will tend to fall. The increase in the cost of francs in terms of sterling will mean that bankers in this country who require francs will endeavour to get them through other centres where sterling is relatively more valuable. They will thus offer sterling for marks, pesetas, etc., and buy francs with those currencies. The offer of sterling against these currencies naturally sends down the rates between London and the respective centres, so that the principal European rates on London tend to move against this country.

Precisely the same considerations apply between the Continental centres themselves, with the general result that the prices of one currency expressed in terms of other currencies tend to move in the same direction in the world's exchange markets. If a currency is in strong demand in one centre, supplies are attracted from other centres in which the demand is not so great; on the other hand, excess supplies of a currency in one place bring about a fall in its price which is immediately reflected in other places where the supply is not so large.

This close relationship between the European exchanges has been greatly accentuated by the modern organisation of the exchange markets and the rapidity of telephonic and telegraphic communication over great distances. Indeed, we may rightly regard the great European centres as branches of one great market in the most intimate relationship, particularly in so far as European exchanges with the rest of the world are concerned.

The opportunities of making profit from arbitrage operations are necessarily much more restricted when the world's principal exchanges are steady than when they are fluctuating markedly, while the narrowing of the margin of profit by intense competition (arising largely from the increasingly close communication which exists between all important foreign exchange markets) means that appreciable sums must be dealt in if the return is to be worth while. Indeed, so far as London is concerned, the position at the present time seems to be that, although simple arbitrage operations are frequently capable of being performed at a profit, the restricted yet rapid movements in the rates render compound and circuitous arbitrage scarcely worth the trouble and forethought which the business involves—especially as stock arbitrage offers much better opportunities for profit. In this respect, however, Continental centres have an advantage in the fact that they can

frequently deal through London at better rates than they can obtain by dealing direct.

The Transfer of Bankers' Funds for Investment.—The transfer of bankers' floating supplies of money from one world centre to another, in order to take advantage of a possible exchange profit and/or to benefit from the best available rate of interest for short-term loans, is nowadays of such tremendous importance in world finance and plays such a vital part in the modern foreign exchange market, that detailed consideration thereof is postponed to Chapter XII.

SPECULATIVE DEALINGS IN EXCHANGE.

Speculative dealings in foreign exchange must be clearly distinguished from arbitrage. The latter consists of *simultaneous* deals in opposite directions with a view to taking a profit from differences in the rates ruling at the same time in various centres. Speculative operations, on the other hand, involve the purchase or the sale of foreign currency with the object of securing a profit from a *subsequent* rise or fall in its value. All such transactions are, of course, precisely on a par with the operations of bull and bear speculators on the stock markets and produce exchanges. "Bulls" of a foreign currency buy amounts of that currency, not to make commercial payments abroad, but because they expect its price to rise. On the other hand, "bears" sell foreign currency which they do not possess, in the expectation that its value will fall and that they can subsequently "buy in" at a lower price.

The effects of speculation vary according to its exact nature. Dealings by well-informed speculators usually reflect future tendencies; i.e., if they expect a rise in the value of sterling, they "buy for the rise" and, by so doing, cause sterling to rise immediately; when the rise takes place they sell out, so depressing the value of sterling. The general effect of such operations is to smooth out fluctuations.

Amongst other factors which will attract the attention of the speculator are: the over-issue of currency; budgetary instability; an unsound banking position; political uncertainty; and labour unrest. Any one of these is sufficient to injure the credit structure of a country, and is often followed by inflation and depreciating exchanges. Hence, the ever-watchful speculator who sees signs that one of these factors is about to come to a head will become a "bear" of that currency. On the other hand, when a country which has been

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suffering from any of the evils mentioned takes effective steps to set its house in order, the speculator will become a "bull" of its currency and will buy for a rise.

Closely allied to speculative movements are those selling operations emanating from persons and firms who have invested funds abroad, but who, fearing for the safety of their money, hurry to repatriate it as soon as there are rumours of trouble. Such nervous transfers of funds can scarcely be termed speculative, though they have the same effect on exchange rates.

Prosperous industrial and commercial conditions, a stable government, sound finance and political peace tend, therefore, to reduce speculative exchange operations, whereas contrary conditions—falling trade, political unrest, labour troubles, and other disturbing factors—tend to produce exchange uncertainties and so to encourage speculators whose actions may either modify or accentuate the effects which may be expected to result from the factors mentioned. More usually the latter is the case, particularly in the case of a depreciating and fluctuating exchange, for unless steps are taken to improve matters, the exchange becomes not an index of business and commercial conditions but the mere plaything of the speculator.

As recent experience has shown, exchange speculation affords ample possibilities of loss as well as of profit during times of widely fluctuating rates. Most readers will remember the unprecedented scale of post-war speculation in foreign currencies—particularly in German marks, French francs, the Spanish peseta and the Austrian krone. People could not get rid of the idea that the values of these currencies would some day be restored, and consequently they were bought up in vast quantities to be hoarded away in the form of notes, or held in the form of balances with banks in this and other countries.

When a currency is badly depreciated, enormous movements may be brought about once holders have been scared into an attempt to realise their holdings, and, in such circumstances, we may witness a world-wide race to dispose of the currency concerned, as happened in the case of the "flight from the mark" during 1923–24 and the several "flights from the franc" which followed changing political events in France and Europe.

In some cases, of course, the speculators were well rewarded. This was especially true of speculation in French francs, since this currency, before it was stabilised in 1928, was as prone to appreciate violently as it was to fall rapidly in value. Speaking generally, however, there is little doubt that the fingers of the majority of post-

war speculators in foreign currencies were badly burnt, and the total amount lost in this way must have been considerable.

Speculative dealings of the kind here discussed are rarely, if ever, undertaken by reputable dealers in the market. It is, of course, part of the business of every professional dealer to "take a view", i.e., to decide for himself whether it will pay to "go short" or "go long" of a currency, according as the indications are that the currency will either fall or rise in value. But it is always a rule with dealers in the English joint stock banks to maintain a "level book" in all currencies (fluctuating or not), and to leave the type of transaction we have described to the dealers in the foreign banks and in the City finance houses.

But whatever the source or the cause of these operations, the important point to be observed here is that, at times, the speculative influence on the prevailing exchanges may be so strong as entirely to obscure what we have described as the legitimate position, and in such circumstances the course of the exchange rates may for the time being be entirely unrelated to the financial or trading position of the country concerned. This was largely the case with the majority of the exchanges during and immediately after the Great War. The combined effects of depreciation and speculation caused movements unprecedented both for their dimension and frequency. Each of the European currencies, in turn, became the butt of world-wide speculation, vast purchases and correspondingly great sales accompanying every change in the internal and external political and financial position of the country concerned.

In such circumstances, no theory could entirely explain the course of the rates of exchange. They were determined not by any considerations of relative purchasing power or balance of trade, but merely by the temporary relation between demand and supply, depending on the whim of the speculator and on the latest rumour afloat in speculative circles.

FACTORS WHICH AFFECT THE RELATIVE PURCHASING POWER OF TWO CURRENCIES.

Since the rate of exchange between any two currencies is determined in the long run by the relation between the purchasing powers of those two currencies, it follows that any factors which bring about changes in the purchasing power (i.e., in the *internal* value) of either

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currency must also bring about fluctuations in the rates of exchange (i.e., in their *external* purchasing power).

Now a currency's *internal* value must, of course, depend on the type of standard which is in use. Some countries have a silver standard, others a standard of inconvertible paper, but in normal circumstances most of the nations of the world pin their faith to gold, by the adoption of one of the three forms of gold standard mentioned in Chapter III, viz., the full gold standard, the gold bullion standard or the gold exchange standard.

Changes in Purchasing Power under Free Gold Standards.—When a currency is maintained on the gold standard, the tendency is for both its internal and its external purchasing power to be the same as the purchasing power of gold. If there are no restrictions on the free movement of gold, exports and imports of the metal automatically bring about the necessary equilibrium. Gold flows out of the country when its value falls too low, and flows into the country when its value becomes too high.

Between a gold standard country and any other country on the same standard, the rate of exchange tends constantly to return to the mint parity. The internal and external purchasing powers of both currencies tend to equal the purchasing power of gold, so that the purchasing power parity between the two currencies is the gold parity. Such fluctuations in the rates of exchange as do occur are confined within the gold points, i.e., the limits marking the cost of buying gold in one of the countries and selling it in another.

Let us suppose that under these conditions one of the countries issues more currency than is actually required for the purpose of satisfactorily effecting her internal business, and satisfying the need of her people for exchange media. The existing currency may consist of gold coins, or of tokens of metal or paper which are convertible into gold on demand. Clearly, if we assume no change in the volume of goods exchanged, the result will be that prices will rise and that the value of the currency (and so of gold) will fall. Credit, being based on the legal tender currency, expands. Retailers and wholesalers borrow more freely and increase their stocks of commodities. Producers of these commodities receive more in profits and wages and so are able to spend more freely. They buy both foreign products and home-trade products, including, in the latter category, services of domestic servants, teachers, builders, etc., whose income and demand for goods are also increased. The extra demand for foreign products will attract additional imports, and may restrict exports

by diverting exportable goods to the home market. Moreover, the rise in prices will cause the purchasing power parity to move out of line with the exchange rates so that imports will be encouraged and exports discouraged. Imports therefore increase relative to exports.

The adverse movement in trade will cause the country's exchanges with other gold standard currencies to move beyond the export specie point. Gold therefore tends to flow out and goods to flow in. Credit contracts, and the value of the currency rises. Ultimately, equilibrium tends to be established at the point where the country has just sufficient currency for its needs and where the purchasing power parities, and hence the rates of exchange, between its currency and other gold standard currencies approximate to the mint par of exchange.

Such conditions apply between all countries which have currencies based on the gold standard. There are forces constantly at work tending to establish equilibrium both in the value of gold and in the level of prices in all the countries. The available supply of gold is distributed among the various countries until each one has just sufficient to maintain her credit system, to support adequately such currency as she requires to effect her internal exchanges with efficiency, and to serve the need of her international financial position. The use of the common gold standard makes for a uniform price level throughout the world, and deviations therefrom in any one of the gold countries are automatically corrected so long as gold moves without restriction.

The Effect of Restrictions on Gold Exports and the Gold Exchanges.—

But although the exchanges between gold standard countries tend to fluctuate within close limits of the mint parity, it must not be thought that such exchanges are never subject to more violent movements. One factor which may be responsible for wider fluctuations than would otherwise occur is the imposition of restrictions on the export of gold from countries which retain the other essentials of the gold standard.

In pre-war days, France and Germany afforded well-known examples of countries which acted in this way. Whilst they were at all times ready to withdraw gold from other countries, they resorted to various devices to prevent gold exports of any magnitude. In France, the Bank of France either refused to supply such gold as was required for export purposes or offered to exchange its notes for silver instead. In Germany, would-be exporters of the precious metal were made aware that their action in removing gold from the country would be viewed with disfavour by high authorities.

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Restrictive action of a similar, though of a far more comprehensive kind, is taken to-day by practically all countries which have continued, in theory, to maintain the gold standard, but, in practice, have resorted to various devices with a view to obviating gold exports and keeping their exchanges as nearly as possible at a predetermined level in terms of currencies on an effective gold standard. Actually, such restrictive action, involving interference with or complete control of the exchange mechanism, has been taken in countries other than those which have sought to maintain the gold standard, but a consideration of the endless variety of restrictive operations must be deferred to a later chapter as their full implications cannot be understood until certain other aspects of the exchange problem have been discussed.

Credit Factors and Gold Exchanges.—Of very great importance in producing relatively wide movements of gold exchanges are disturbances of credit. In all modern communities the vast majority of daily exchanges are effected by means of credit instruments, such as Government or bank notes, cheques and bills of exchange. As a result, a vast superstructure of credit is built upon a small metallic reserve, and any variations in the volume of that credit necessarily have most widespread effects both on the trade of the nation and on its foreign exchanges.

In ordinary circumstances, the volume of credit expands or contracts fairly regularly in response to trade demands, but there are times when the expansion is so great and the subsequent contraction so violent as to cause widespread disturbance. A period of trade activity, progress and business initiative, based on the prospect of increased gain, gives rise to general feelings of buoyancy, an expansion of commercial enterprise and an extension of credit. Prices rise and speculation is encouraged. If this is continued to an unwise extent, reaction inevitably follows, bringing in its train wholesale liquidation, a period of trade depression, business uncertainty and falling prices.

It is now the generally accepted aim of all established Governments and central banks so to regulate the volume of credit as to minimise such disturbances and, so far as it is possible, ensure steady internal prices with reasonable stability of the foreign exchange rates. The basis of central bank policy throughout the world is the prevention of a cycle of excessive buoyancy and marked depression, and the maintenance of steady commercial and industrial growth without serious set-backs. Accordingly, when credit shows a tendency to expand beyond the limits of safety, steps are taken to curb speculation,

as, for example, by raising the rate of interest at which funds may be borrowed for speculative use. Conversely, when business conditions incline to stagnate, an endeavour is made to promote legitimate trade enterprise by lowering the rate of interest and thereby encouraging the use of borrowed money in healthy business operations.

Even in the best regulated communities, however, troubles are bound to arise. From time to time events occur which have the effect of causing a violent and unexpected contraction of credit. The immediate cause of the reaction may be a single event, such as a great flood, the failure of a harvest, the outbreak of war, a strike in an important industry or the failure of a great financial house or banking firm. Or there may be a series or sequence of events or disturbing causes which, although individually of relative unimportance, have a cumulative depressing effect on business activity. In any such case, the disturbing factor or factors lead to a loss of confidence on the part of business men, both at home and abroad. Foreign trade is necessarily discouraged, and fluctuations in the foreign exchanges follow the upheaval in trade, the withdrawal of foreign balances, and the changes in the purchasing power parity brought about by the variations in internal prices. The tendency is to unfavourable exchanges, and, if gold can be withdrawn for export, it may leave the country in considerable quantities before the position is finally adjusted.

Conditions of this kind have arisen on several occasions during the past history of Britain, and only at the cost of heavy inroads into her gold reserves has she been able to maintain her rigid adherence to the principle of the gold standard and of a free gold market. The events of 1931 were of the nature described, but on this occasion the disturbance was of such magnitude that it was found impossible to maintain the convertibility of our notes (*see post*, Chapter XX). Other countries, when faced with similar conditions, have not been so willing to part with their gold holdings, and thus, in spite of their theoretical maintenance of the gold standard, their exchanges have fluctuated considerably beyond the limits imposed by the export and import specie points.

Inconvertible Currencies.—Uncertainty in exchange is much accentuated when one or both of the two currencies concerned is depreciated through excessive issues of inconvertible tokens of metal or paper.

The great drawback to an inconvertible paper currency is that, while its quantity can be increased without limit, it cannot be *contracted* in the same way as a convertible note issue. Once such

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paper is put into circulation, it remains in circulation until such time as the Government is in a position to redeem it, and decides so to do. Theoretically, if the amount is strictly limited, and the issue is regulated according to the demands of trade, it is possible that with proper precautions an inconvertible note issue might perform the usual functions of an efficient internal currency and the exchanges be kept reasonably stable. Britain, since she suspended the gold standard in September, 1931, has clearly shown that, by rigid attention to the national finances and by a regular balancing of the Budget, control of an inconvertible currency is *possible*.

But what Britain has achieved by painstaking sacrifice might not be achieved by other countries, and, unfortunately, the history of inconvertible paper issues throughout the world is not encouraging.

In brief, the value of an inconvertible currency is not firmly tied to the value of gold, as is the case when the notes are freely convertible into gold, and it is mainly for this reason that inconvertible paper is always liable to be issued to excess. A Government issue of inconvertible currency is in the nature of a forced internal loan, costing little or nothing to raise, and carrying no interest or obligation to repay the principal. The temptation to over-issue is therefore often irresistible, and in times of financial stress Ministers are glad to avail themselves of a method which, merely by setting the printing press to work, places large funds at their disposal. Appetite grows by what it feeds on, and every additional issue still further depreciates the national currency. The prices of commodities rise, including those of the precious metals. Gold and silver coins are melted down, hoarded, or are exported and sold abroad, and thus disappear from circulation. The paper currency becomes so discredited that the people will accept it only under compulsion.

Generally, it may be said that the deliberate over-issue of a paper currency (*inflation*, as it is called) is made by the Government concerned for the purpose of covering a budgetary deficit, a state of affairs which may result from the outbreak of war, or the occurrence of other national disasters, such as widespread crop failures, or extensive floods. Funds must be raised in some way, and an additional issue of inconvertible notes affords the easiest, though not the best, method of raising them.

Unfortunately, inflation, once started, is difficult to stop; the Government finds its expenditure continually outpacing its revenue, since the former increases with every rise in prices, whilst the latter is paid in notes whose value is continually falling. Hence the Budget deficit

must be met either by the issue of more notes, leading to further inflation, or by the imposition of heavier taxation. The first alternative is usually taken, and so matters go from bad to worse; the fear of further inflation causes traders to charge "to-morrow's price", thus accentuating the tendency for prices to rise still higher and making necessary additional issues of currency. It is obvious that, under such conditions, domestic as well as foreign trade must be a matter of great difficulty and anxiety, and such difficulties will continue until drastic action is taken to place the national currency and finance on a sound basis.

Inconvertible Currencies cause Widely Fluctuating Exchanges.— Since the purchasing power of the inflated currency will vary each time its quantity is increased, it necessarily follows that the purchasing power parity will also move and engender still further fluctuations in the prevailing rates of exchange. Moreover, the position will be rendered even more complicated and unstable by the anticipatory dealings of speculators "for the fall", and, on occasion, "for the rise".

Movements of the exchanges are violent enough between an inflated currency and a gold standard currency. But the exchange position is still more complicated and uncertain when *both* currencies are depreciated. The influences affecting the relative purchasing power parity between the currencies then come from two directions; exchange fluctuations are brought about by every change in the value of *either* currency following on further issues of inconvertible paper. If we assume that both countries start from the position of a common gold standard, then we may say that the purchasing power parity between their currencies will be determined *by the relative degree to which those currencies are inflated* (see Chapter III).

Whenever inflation is resorted to there is, in practice, always a fear that it will be carried further (this is especially the case with an inconvertible currency), and, both at home and abroad, there is a failure of confidence in the currency. Consequently the rate of external depreciation, i.e., the rate at which the foreign exchanges move against the country, tends to be more rapid than the rise in internal prices.

In such circumstances, the currency is said to be *under-valued*, i.e., it will buy less goods abroad than it will buy at home. This at first makes the country a cheap market in which to buy, since its currency is cheap in terms of others, and the internal prices of its products are little more than normal. Exports are therefore encouraged, while imports, owing to the low purchasing power of the home currency, are discouraged, and the tendency is towards a favour-

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able balance of trade which would automatically create a demand for the home currency and improve its value. Experience has shown, however, that inflation of a paper currency, once begun, has a strong tendency to continue, while the rate of rise in internal prices also increases, until the margin of advantage to foreign buyers disappears.

The extent to which a paper currency is depreciated is shown, approximately, by the premium on gold, which rises higher and higher with each new currency issue. If, for example, £200 in notes will exchange for no more than £100 in gold, the premium on gold is said to be 100 %, and paper is reckoned to be at a discount of 50 %. The extent of the premium on gold will usually indicate how far the exchange rate has diverged from the Mint Par or normal exchange value.*

As is natural, the frequent variations in the rates of exchange cause widespread uncertainty in business circles. They disturb trade and make future contracts wellnigh impossible. To protect themselves, exchange dealers charge high rates in order to cover the risk of exchanging a currency of uncertain value, with the result that transactions for legitimate trading customers are not conducted on the ordinary basis of a reasonable profit. Moreover, the tendency is for legitimate traders to shun business with a country whose currency is depreciated and subject to constant fluctuation. They prefer to do no business rather than to do business which partakes of the nature of absolute speculation, and which, instead of offering some certainty of reasonable profit, is quite likely to cause serious loss. A country with a currency of this kind can buy goods abroad only if her traders undertake to make payment either in the currency of the selling country or in a widely accepted gold currency, such as the dollar. But by so doing those traders are compelled to bear the risks arising from exchange fluctuation.

Though legitimate traders thus tend to avoid fluctuating and depreciating exchanges, speculators make them their happy hunting ground. Every change in the economic conditions and credit of the country concerned as disclosed by its published statistics of industrial activity, of foreign trade, of circulating currency, and of budgetary finance is followed by operations on the part of speculators who take a favourable or unfavourable view of the latest developments. If currency returns indicate that inflation of the currency is in progress, or if the budgetary position shows a heavy deficit, speculators "sell short" of the currency in the expectation that a future fall in its value

* This fact is recognised and expressed in *Lord King's Law*, see Chapter XVI.

will enable them to meet their commitments at a profit. If, on the other hand, a country's trade returns show that its position is improving, or if, after a period of financial disorder, a nation's finances are subjected to rigid control and its budget properly balanced, speculators who take an optimistic view of the position will "go long" of the currency, i.e., buy supplies of the currency in order to sell later at a profit.

Sooner or later, of course, a remedy must be found, for, as long as conditions of this kind persist, the country concerned cannot hope to maintain a position of any great importance among the trading nations of the world. Unless steps are taken to establish her currency on a proper basis, the national credit will be damaged to such an extent that she may experience great difficulty not only in re-establishing her trading position, but also in obtaining from other nations that financial co-operation in the form of loans and credits which is almost always necessary in such cases. The harmful effect of a depreciated internal currency on foreign trade and on the exchanges becomes wellnigh disastrous if it is allowed to continue to the point where the national credit becomes badly impaired. Nowadays, credit, the expression of mutual confidence between man and man, and between one nation and another, plays a most conspicuous rôle in international trade and exchange. Everything which tends to promote that confidence expands, and everything which tends to impair that confidence restricts, those business operations which, in the modern world, are almost entirely dependent on credit. For these reasons the effects of a disorganised currency and of a badly depreciated exchange tend to be cumulative, and the credit of the country concerned sinks lower and lower until drastic steps are taken to put its house in order.

It should be fairly obvious, too, that the various factors to which we have already referred as causing sudden disturbances of credit in gold standard countries must have far more disastrous consequences where a depreciated inconvertible currency rules. Where the currency is already depreciated and subject to frequent fluctuation, the whole credit mechanism not only becomes extremely sensitive to disturbing events and to changes in public sentiment at home and abroad, but also recoils far more extensively from such influences. Moreover, a country whose currency is in such a condition takes a far longer time to recuperate from a period of depression, and has to make far greater sacrifices to do so, than a country which is in the more fortunate position of having a reasonably stable basis of internal and external exchange.

CHAPTER XI

FORWARD EXCHANGE

FORWARD rates of exchange are those which are quoted for purchases or sales of foreign currency to be completed at the expiration of a specified period. The essence of these transactions is that a rate of exchange is fixed *now* between a buyer and seller at which a certain amount of foreign currency shall be delivered on a specified future date, which may be one month, two months, three months or more ahead from the date of the bargain. Forward transactions are carried out not only on the Market but also between banks and their customers.

Although properly completed contract forms (see Chapter XXI) are exchanged between buyer and seller at the time the deal is effected, no actual cash passes until the agreed future date, when the foreign currency is delivered by the seller, and the equivalent in sterling is paid by the buyer.

The Development of the Forward Market.—In pre-war days, when fluctuations in most rates of exchange were confined within very narrow limits, such limited forward facilities as existed were practically confined to fluctuating exchanges, in particular, those of South America.

The Great War brought into being vastly different conditions. Many exchanges fluctuated with a total disregard of economic factors; they were influenced by every change in international politics, and by every whim of the speculator in foreign currencies. Hence business men in this and other countries were compelled to give far more attention to international exchange. They had to recognise that a movement in an existing rate might easily wipe out a fair commercial profit, and our own traders, more especially, were forced to assume part of the exchange risks which they had formerly left almost entirely to the foreigner. The merchants naturally turned to the banks for assistance, and, as a result, the machinery of forward exchange was considerably extended until it embraced all important currencies. International trade was thus relieved of some of its difficulties, and

the risks which had become inseparable from exchange operations were transferred to the shoulders of the banks.

The Method of Quoting Forward Rates of Exchange.—In practice, forward rates are quoted, not (like spot rates) in terms of a number of units of one currency for one unit of another, but at par, or at a "margin" of so many points *premium* or *discount*, relative to the spot rates. The margins are usually expressed in terms of the subsidiary unit of the currency concerned, i.e., in terms of cents for the dollar rate, centimes for the French rate, and pfennige for the rate on Berlin, but, occasionally, the rates are quoted in terms of the currency unit itself, e.g., $\frac{1}{16}$ or $\frac{1}{8}$ franc and $\frac{1}{4}$ or $\frac{3}{4}$ lira.

Although the published quotations are invariably for periods of one, two or three months, it is usually possible to obtain quotations for longer periods up to six months, or for "broken" or irregular periods, such as six or ten weeks. In general, however, such exceptional quotations can be obtained only at rates which are proportionately not quite as advantageous to a buyer as the ordinary standard market rates.

In actual fact, as explained on page 250, the rates which are quoted *on the Market*, and which are subsequently reproduced in the newspapers, represent the "differences" for which spot currency can be exchanged or "swapped" for forward currency, because *Market* forward deals are rarely *outright* purchases or sales of forward currency as are the transactions between bankers and their customers. The rates for transactions with customers are, however, based directly on the market rates.

Thus at a certain time the following rates were quoted on New York and Paris:—

"New York, T.T. . . 4·85 $\frac{1}{2}$ Paris, T.T. . . 92·60."

At the same time the forward rates were quoted:—

"New York—1 month $\frac{1}{4}$, 2 months $\frac{3}{4}$, 3 months $\frac{1}{2}$, *premium*."

"Paris—1 month 45, 2 months 80, 3 months 112, *discount*."

In the case of New York the fractions represent cents which are *deducted from* the spot rate (i.e., forward dollars are *at a premium* and *dearer* than spot dollars), while the figures in the Paris quotations represent centimes which are *added to* the spot rate (i.e., forward francs are *at a discount* and *cheaper* than spot francs).

The following table shows the rates corresponding to the above quotations:—

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	SPOT RATE.	FORWARD RATES.		
		1 month.	2 months.	3 months.
New York ..	\$4·85½	½ premium = 4·85	½ premium = 4·84½	½ premium = 4·84½
Paris	Fcs. 92·60	45 discount = 93·05	80 discount = 93·40	112 discount = 93·72

From these figures it will be seen that when forward quotations are at a discount and the rate is quoted in foreign currency, more currency is obtainable per £1 at the end of the stated time than would be obtained by a purchase of spot currency, and, on the other hand, when forward currency is quoted at a premium, the forward rate is lower than the spot rate and consequently less currency is obtained at the end of the fixed time than could be purchased by a spot deal. It should be noted also that the premium or discount for forward quotations may remain the same although the spot rate may fluctuate.

Forward quotations are sometimes given for buyers and sellers in "double-barrelled" form in the same way as the spot rates. Thus the forward rates on Paris may be quoted as "10 20 c. per month, discount," at a time when the spot rate is given as 124·00-124·12½, and, if the quotations were applied in dealings with customers, the corresponding rates would be as follows:—

		Selling.	Buying.
Spot rate	..	124·00	124·125
1 month forward rate	..	124·10	124·325
3 months forward rate	..	124·30	124·725

The reader should observe that in this case the margin between selling and buying prices increases as the forward period lengthens, since the forward discount is said to be so much "*per month*".

When the forward margin is *under* spot (i.e., at a premium) it is usual to quote the double-barrelled rates thus: "20-10 c. per month, premium". It will be noticed that the figures are reversed to facilitate comparison with the buying and selling spot quotations in which the *lower* is usually quoted first.

Forward Exchange Quotations.—It remains to be stated that forward exchange rates on the principal centres are nowadays quoted in the newspapers in conjunction with the lists of daily quotations which are discussed in the foregoing paragraphs, and references are

almost invariably made in the Foreign Exchange Article to the fluctuations which have taken place in the forward rates.

Appended is a specimen of the table of forward exchange rates given by the *Economist*. In this table the rates on New York, Paris,

Forward Exchange Rates.

(*Economist*, 13th January, 1934.)

(Closing quotations.)

London on		Jan. 5, 1934. Per £.	Jan. 6, 1934. Per £.	Jan. 8, 1934. Per £.	Jan. 9, 1934. Per £.	Jan. 10, 1934. Per £.	Jan. 11, 1934. Per £.
New York, cent.	1 Month	(b)	(b)	(b)	(b)	(b)	(b)
	2 ..	3½ 3½	3½ 3½	2½ 3½	2½-3½	1½-2½	1½-2
	3 ..	5 5½	5-5½	4½ 5½	4½-5½	3½-4½	3½-3½
Paris, cent. ..	1 Month	(b)	(b)	(b)	(b)	(b)	(b)
	2 ..	4 8	4 7	5 8	5 8	4-8	5-8
	3 ..	11 16	10 15	10 15	10 15	10-15	12-17
Holland, cent.	1 Month	(b)	(b)	(b)	(b)	(b)	(b)
	2 ..	16 21	17 22	20-25	19-24	19-24	19-24
	3 ..	(a)	(a)	(a)	(a)	(a)	(a)
Brussels, cent.	1 Month	½ par	½ par	½ par	½ par	½ par	½ par
	2 ..	½ par	½ par	½ par	½ par	½ par	½ par
	3 ..	½ par	1 par	1 par	1-par	1-par	1-par
Zurich, cent. ..	1 Month	(b)	(b)	(b)	(b)	(b)	(b)
	2 ..	par-1	par-1	par-1	par-1	par-1	par-1
	3 ..	par 2	par 1	par 1	par-1	par-1	par-1
Italy, lira ..	1 Month	(a)	(a)	(a)	(a)	(a)	(a)
	2 ..	1 par	2 par	2-1	2-1	2-1	2-1
	3 ..	2 par	2 par	3-1	3-1	3-1	3-1
Italy, lira ..	1 Month	(b)	(b)	(b)	(b)	(b)	(b)
	2 ..	3 1	3 1	3½ 1½	3½-1½	3½-1½	3½-1½
	3 ..	(a)	(a)	(a)	(a)	(a)	(a)

(a) Premium, i.e., "under spot."

(b) Discount, i.e., "over spot."

Brussels and Italy are over spot, i.e., they are at a discount. On the other hand, the rates on Holland and Zurich are under spot, i.e., the forward quotations for one month are at a premium.

The following paragraph on forward rates is taken from *The*

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Manchester Guardian Commercial, and should be readily understood in the light of the foregoing remarks.

The forward markets have been dull. Forward dollars have been in strong demand on account of investment "swaps" and firm money rates in London with easy rates in New York. The premium paid has been as high as $\frac{1}{8}$ for one month and $\frac{1}{4}$ for three months. Other periods have been dealt in at various rates up to $\frac{1}{4}$ for six months. French francs have been between 40 and 50 centimes discount for one month throughout the week with a three months' quotation of Fc. 1·10–Fc. 1·20, but business has been only moderate. Forward lire still command a premium of 15 centesimi for one month and 40 centesimi for three months. The premium on Swiss francs and Dutch guilders is easing off, one month being practically at par in each case with the spot rate, while for three months a slight premium of $\frac{1}{4}$ centime is asked.

The fractions $\frac{5}{16}$, $\frac{11}{16}$ and $\frac{15}{16}$ used in connection with forward rates on New York are, as previously indicated, fractions of U.S. cents per £1, and as the rates are said to be at a premium, the fractions must in all cases be *deducted* from the spot quotations to give *dearer* forward rates for purchasing dollars. It will be noted that the premium on dollars on the date in question was due chiefly to transfers for investment purposes, the market preferring to keep its funds in London rather than in New York by reason of the higher money rates in the former centre, and thus resorting to purchases of forward dollars against spot sales, as explained on page 276. In other words, holders of dollars in New York sell them for sterling in London and purchase forward dollars, thus fixing the rate at which they will ultimately convert their sterling holdings into dollars.

Covering Forward Operations.—It is obviously no part of a banker's business to assume risks which should properly be borne by his customers. No banker can possibly sell a customer pesetas, three months forward, at 32 per £1 and himself run the risk of having to buy them in at 25 per £1 when the time comes to deliver. Nor can a banker undertake to buy Japanese yen from a customer, three months forward, at 2s. 1d., and run the risk of their being worth only 1s. 6d. when handed over by the customer at the expiration of the agreed period. Consequently, it has always been the practice for banks to cover or protect themselves in respect of all ordinary forward operations by one of several methods which are available. Theoretically there are four possible methods which may be adopted, for example, by a banker who has *sold* foreign currency forward. He may:—

- (1) Lay down the requisite funds in the foreign centre at once by the purchase of T.T., M.T., G.M.T., cheques or sight drafts on that centre, so that the difference between the rate at which he buys and that at which he has sold forward

represents his profit on the transaction, subject to any gain or loss of interest occasioned by the transfer of his funds.

- (2) Buy in his own market a *forward* T.T. in the foreign currency, deliverable on the same date as the one he has sold, i.e., cover his own forward sale by finding another dealer in the Market who has the same currency to sell forward.
- (3) Arrange by wire or cable with his agent in the foreign centre to sell that agent sterling against the requisite amount of foreign currency, either spot or as a forward deal. We have already noted that banks abroad are far more willing to run "open positions" than are our leading banks, so that a London dealer may easily find among his foreign correspondents someone who is willing to sell him the foreign currency (i.e., to buy sterling) forward for delivery on the maturity date of the banker's contract with his customer.
- (4) Buy long bills in the foreign currency concerned, maturing at approximately the same time as the forward payment is due to be made by him.

Relatively few forward sales are covered by the last method, i.e., the purchase of long bills maturing at approximately the same date, for there are obvious practical difficulties in the way of doing this. There is first of all the difficulty that bankers could not always obtain bills of the right amount maturing just when the funds are required, so that they more often cover their purchases of long bills by forward sales than they cover forward sales by purchasing long bills. In practice, too, bills come along as part of the banker's routine business; the banker does not search for such bills because he wants them as cover or for any other reason. But when bills *do* come into his hands, he will use them as cover whenever he can suitably do so, but more especially when the bills earn a higher rate of interest than he can obtain by employing the funds either at home or elsewhere. Finally, there is the difficulty that, as bankers in this country do not draw long bills or re-sell foreign bills which have come into their hands, they are obviously not in a position to cover their forward *purchases* of foreign currency by the sale of long bills in the same currency.

The first method, i.e., covering forward sales of foreign currency by an immediate spot purchase of T.T., M.T. or cheques, means that the bank dealer is faced with the necessity of making an immediate outlay for the purchase of the spot currency. But, so far as ordinary business is concerned, a variety of reasons may render any such action

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both unprofitable and undesirable. Banks prefer to keep their funds liquid, and the practice of laying down funds abroad for any period is resorted to, in the absence of special circumstances, only when the banks find it remunerative to do so from an investment standpoint.

Dealers who buy or sell forward, therefore, cover themselves by the second or third method, and can do so because the development of the Market in forward currencies has made it possible for the banks to "marry" their forward transactions, i.e., to match or set-off forward purchases with forward sales, and *vice versa*. Nowadays, a dealer who has sold currency forward can usually without difficulty obtain forward cover by resorting to the forward market through the intermediary of one of the many brokers with whom he is in constant touch. Thus it has become a common practice to cover all *important* forward operations by entering into corresponding transactions in the opposite direction, such covering transactions being effected, in the great majority of cases, on the dealer's *own* market.

As regards smaller transactions with his customers, the dealer usually sets off his purchases against his sales, and only when the one exceeds the other by a considerable amount does he trouble to cover: then he covers the whole balance in one operation, and, as a rule, he experiences no difficulty in picking up, either in London or in the foreign centre, sufficient forward cover for all his ordinary requirements.

The Basis of Forward Rates.—Like all prices, the price of forward exchange depends on demand and supply. In normal times, however, the forward rates are very closely linked to the spot rates, and the margin between them is dependent almost entirely on differences in interest rates.

The reason for this is not far to seek. Suppose, for instance, that on any given day the offerings of forward francs exceed the demand for them, and that the price of forward francs consequently falls below the price of spot francs, i.e., forward francs *go to a discount*. The discount must be sufficient to induce dealers to take up the surplus forward francs, and, in the absence of sufficient forward cover, this means that they will have to cover by spot sales.

Now the obvious result of covering a forward purchase by a spot sale is to involve an immediate transfer of the dealer's funds from Paris to London. When the dealer sells spot francs his sterling balance in London is enlarged, while his balance in Paris is depleted. If interest rates are higher in Paris than in London, the dealer will naturally view such a movement with disfavour, since the francs in Paris would earn more interest than can be obtained by employing

sterling in London, and he will not therefore undertake the forward purchase unless the *discount* is at least sufficient to compensate him for this loss of interest and to provide him with a reasonable margin of profit. On the other hand, the force of competition will prevent the discount on forward francs from becoming much greater than the interest margin, for, if the difference becomes at all marked, dealers will buy forward francs against spot sales with a view to gaining a profit from the margin after allowing for the loss of interest.

The London forward rate on Paris will therefore be quoted at a *discount*, which will represent the amount which sellers of forward francs must *give away* in order to earn the higher interest rates in Paris. If interest in Paris is 2 % higher than it is in London, the difference represents approximately 20 centimes per month on a rate of 124 francs, and this is the *maximum* amount per £1 which the London dealer can give away without incurring loss. Hence, the one month forward rate in such circumstances will not normally be at a discount of much more than 20 centimes.

If in such circumstances the margin between the interest rates is *increased* by a change in the bank rate in one of the centres, the tendency will be for the discount on forward francs in London to increase, i.e., the margin between the spot and forward rates on Paris will be widened. Conversely, if the difference between the interest rates is *narrowed*, the discount on forward francs will tend to decrease, i.e., the margin between the spot and forward rates will tend to narrow and may, in fact, disappear entirely in favour of a premium.

In reverse conditions, where interest rates in Paris are *lower* than they are in London, dealers in the latter centre will lose interest on a purchase of spot francs to cover a forward sale and will therefore charge more for forward francs. If possible, they will repatriate part of their funds in Paris by selling spot francs and buying forward francs to cover. The market tendency is therefore to depreciate the spot rate and send the forward quotation to a *premium*, representing the amount which must be paid by anyone wishing to buy forward francs in order to overcome the reluctance of the London dealers to transfer their spot funds to Paris, this reluctance being measured by the loss of interest occasioned by such a transfer.

Suppose, for example, that interest rates in London are 2 % higher than in Paris, and the spot rate, London on Paris, is Fcs. 124 = £1. Then the premium on the forward French quotation will tend to be 20 centimes per month, i.e., the one month forward rate will tend towards 20 centimes premium.

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The premium on forward francs in London will *increase* if a change in interest rates, either in London or in Paris, *increases* the difference in favour of London. Conversely, the premium will *decrease* if such a change lessens the difference in London's favour, while it will tend to disappear altogether in favour of a discount if interest rates in Paris ultimately become higher than those in London.

From this explanation it will be clear that, other things being equal, the forces which send forward sterling to a premium must send forward francs to a discount, and *vice versa*. When interest rates are low in Paris and high in London, the influence of the desire of London dealers to withdraw their funds from Paris is accentuated by the desire of dealers in Paris to transfer their balances to London. Conversely, when interest rates are higher in Paris than in London, the effect of transfers of London funds to Paris will be accentuated by the withdrawal of French funds from London.

A Practical Illustration.—Let us assume that a London dealer is able to deal at $4.86-4.86\frac{1}{2}$ on New York, and that he is asked to quote a rate for the *sale* of \$50,000, three months forward. Let us assume further that the best rate which the dealer can obtain on funds in London is 4 %, but that he can get a rate of 6 % by placing funds on three months fixed deposit in New York. What rate will he quote for three months forward dollars in these circumstances?

Following the principles explained above, we must assume that the dealer can cover himself immediately by purchasing the same quantity of dollars spot. He knows that he can place these on fixed deposit in New York, to earn interest at 6 % per annum, i.e., 2 % more than the equivalent sum can earn in London. On \$4.86 (the rate the dealer will have to pay the Market) interest for 3 months at 2 % per annum is \$.0243, and this sum represents the *gross* difference (i.e., neglecting expenses) which he can gain per £1, or per \$4.86, by transferring funds from London to New York.

Theoretically, therefore, the London dealer would arrive as follows at the best rate which he could quote in the circumstances:—

	\$
He can purchase spot dollars at	4.86
The gain by holding these in New York for three months is	0.0243
	<u>4.8843</u>
Deduct expenses, brokerage, etc., say	0.0025
Maximum forward selling rate which he can offer without loss ..	<u>4.8818</u>
Nearest commercial rate.. .. .	<u>4.88$\frac{1}{2}$</u>
or 2 $\frac{1}{2}$ c. discount per three months on the market quotation for spot dollars.	

In other words, the dealer could safely sell the required three months forward dollars at $4.88\frac{1}{2}$ per £1 without incurring either profit or loss. Actually, of course, he will want to make a profit, but the force of competition will compel him to pass on to the buyer part, at least, of the interest gained by the transfer of funds to New York. At times, circumstances may compel the dealer to hand over practically the whole of the advantage, but it will be clear that, by offering the buyer anything *less* than $2\frac{1}{2}$ c. in the rate, the dealer will make a profit.

Let us now consider the reverse case where the dealer, instead of being asked to supply forward dollars, is asked to quote a rate for the *purchase* of \$50,000, three months forward. How is the rate determined in this case?

The dealer will assume that he must sell dollars at the spot rate in order to cover his forward purchase, say, at $\$4.86\frac{1}{2}$. He may have the requisite dollars actually standing to his credit in New York, but, in arriving at his rate for the forward purchase, he may not give the seller the benefit of this unless he is particularly desirous of bringing his funds home from New York. If the dealer's sale of the forward dollars involves his becoming overdrawn with his New York agent, he will be compelled to pay interest, at the rate prevailing in New York, on the amount of his overdraft, say 6 %, but he must make allowance for the fact that by selling dollars spot he has the use of sterling in London for the period of the forward transaction at, say, 4 %. Hence, the interest allowance which the dealer will make will tend to be the difference between the overdraft rate in New York and the rate at which he can employ his funds in London.

Theoretically, then, the forward buying rate would be arrived at as follows:—

The dealer covers by selling at the spot rate	4.8625
Loss by transferring funds from New York for three months, say @ 2 %	0.0243
	4.8868
Add expenses, etc., say	0.0025
Lowest rate at which the dollars will be purchased, three months forward	4.8893
say, 4.89, or $2\frac{1}{2}$ c. discount per three months.	

As already pointed out, the force of competition may cause a lower rate to be quoted on the Market by other dealers who have dollars standing to their credit in New York and who are willing to repatriate their funds. If the dollars are earning only 5 % in New

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York, dealers will allow for an interest difference of only 1 % and will, therefore, be able to quote a smaller discount.

Swaps.—We have now to consider a further important qualification of the statement that bankers nowadays commonly cover their forward transactions by opposite forward deals in the Market, for, except where a currency is in a very stable position, the method of covering a forward transaction in the Market does not usually consist *solely* in a corresponding forward deal in the opposite direction, as would appear at first sight.

By way of illustrating the actual procedure, we will assume that, when the London-New York spot rate is quoted in the Market at $\$4.85\frac{1}{4}$ — $4.85\frac{5}{16}$, and the three months' forward rate $\frac{5}{16}$ — $\frac{3}{16}$ o. under spot, a dealer sells to a customer \$150,000 three months forward at $4.84\frac{3}{4}$. (The basis on which this rate is fixed will be explained below.)

Now the dealer's first step as a rule will not be to cover his forward sale by an immediate forward purchase, but to buy *spot* dollars to the amount required, i.e., he will buy a T.T. on New York for \$150,000, say, at $\$4.85\frac{1}{4}$, with the result that he will be in the position of having sold \$150,000, three months forward, and of having bought that quantity of dollars for immediate delivery to him. But as this spot purchase of dollars means that the dealer's funds will be tied up in New York for three months, he next executes what is known as a "spot and forward operation" in order to balance his position, i.e., he executes a *combined deal* through a broker, selling \$150,000 spot and buying the same quantity three months forward *at a difference*—in market parlance, he "swaps" his spot dollars for forward dollars. For example, he may sell the spot at $\$4.85\frac{5}{16}$ (the market buying rate for spot), and buy the forward at a difference of $\frac{5}{16}$ cent against him, i.e., at $\$4.85$. In other words, the dealer will give away a margin of $\frac{5}{16}$ cent in the rate in order to swap his spot dollars for the same quantity of forward dollars.

The dealer's position after completing this "four-cornered" operation may be stated as follows:—

SALES.	PURCHASES.
\$150,000, three months forward, to customer @ $\$4.84\frac{3}{4}$.	\$150,000, spot from the Market @ $\$4.85\frac{1}{4}$.
\$150,000, spot to the Market @ $\$4.85\frac{5}{16}$.	\$150,000, three months forward, from the Market @ $\$4.85$.

The result is therefore that the dealer has bought and sold his spot currency at a loss of $\frac{1}{16}$ cent in the rate, whilst he has purchased

the forward dollars for ultimate delivery to his customer by the market seller at a margin of $\frac{1}{4}$ cent in his favour, i.e., at a rate which, from his point of view, is $\frac{1}{4}$ cent better than that at which he has sold to his customer—showing a *gross* profit of $\frac{3}{16}$ cent on the transactions. To arrive at his *net* profit the dealer must, of course, allow a certain percentage in the rate for expenses and brokerage, possibly amounting in all to approximately $\frac{1}{32}$ cent in the rate, leaving him with a net profit of about $\frac{5}{32}$ cent for each £1 of his outlay.

Swaps of this description are done as part of a dealer's ordinary operations to put his forward position square. If, for example, a dealer has over-sold forward dollars, he at once buys spot to make his book level (i.e., to square his *total* purchases and *total* sales of dollars). But his *forward position* still remains unbalanced; that is to say, he has bought spot and contracted to sell forward, and, as a series of operations like this would result in a large amount of the dealer's funds being locked up in dollars and lying idle until his forward sales mature, he remedies the position by a "swap", i.e., he sells spot dollars and buys them forward in one combined deal.

It now remains to explain why the dealer who has undertaken to sell a quantity of dollars forward covers himself *first* by purchasing spot dollars instead of immediately effecting a forward purchase of the required quantity. The most important reason for this is that market transactions in forward currency mainly take the form of combined spot and forward deals "at a difference", and that the market in "outright" forwards (i.e., operations involving the *simple* purchase or sale of forward currency as distinct from "forward swaps") is very restricted. Hence, a dealer who tried to cover a forward sale of dollars by an outright purchase of forward dollars would experience difficulty in getting a "fine" rate, i.e., the rates quoted to him would probably be less profitable, as the margin on "outright" business is much higher owing to the restricted competition.

Secondly, since the spot rate is the *basis* of the forward rate, it is to the dealer's advantage to fix this rate absolutely, otherwise he may find, when he comes to cover, that the spot rate, and consequently the forward rate, have moved against him. Once he has purchased spot currency he is protected against an adverse movement either of the spot or of the forward rate, because the forward rate follows every movement in the spot rate, except, of course, when the *margin* between spot and forward alters. Hence, the banker's only risk of loss is that the "difference" between the spot and forward rates may

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have moved against him by the time he is ready to cover. Such changes are of small amount and occur relatively infrequently.

Let us suppose, in the example given, that the dealer had delayed covering his forward sale and had looked around for a favourable outright forward rate. During this time the spot rate may have moved to $\$4.84\frac{13}{16}$ —4.85, though the forward *margin* has remained unaltered, with the result that the forward (as well as the spot) rates will have moved against the dealer, whereas, by carrying out the immediate spot cover he would have been safeguarded against any change in the spot rates. The only way in which he might suffer loss would be by an unfavourable movement in the forward *margin*, but the basis of forward margins, as we have seen, is the difference in the rates of interest current in the two centres, and these would very rarely change in the course of a few hours. Hence the dealer, knowing this, is safe in effecting a spot operation, as soon as he has settled a forward deal with his customer, if he desires to keep his position "all square".

It will be realised, too, that another great advantage of this method of covering is that a dealer is able to cover his spot and forward transactions *at the same time*. He keeps a running total of his spot and forward sales, and continually compares this with the total of his spot and forward purchases: the balance he covers by buying or selling spot, as the case may be. Then from time to time he adjusts his spot and forward positions by judicious swaps. At busy times it is far easier for the dealer to cover his forward transactions in his spot operations because the latter are far more numerous (although not necessarily as large) so that the spot cover can be worked in with current deals without difficulty.

The actual settlement of a swap on the Market is carried out just as though it were two separate deals. Hence, a dealer who sells spot francs against forward francs must deliver the spot francs (and will receive the sterling proceeds) immediately. The forward francs will be delivered to his order at the expiration of the agreed period, against payment by him of the sterling equivalent. Only one brokerage is payable on the combined deal.

One further point may be noticed. The fact that most *market* forward transactions consist of a combined deal at a difference, over or under the spot rate, explains the quotation of forward exchange rates in terms of a given discount or premium per one month, two months or three months, over or under the spot quotations. This method makes it much easier for the dealers to determine the profit

or loss likely to accrue through a forward operation conducted at the quoted rate.

Spot Cover Still Used on Occasion.—It must not be imagined that even to-day dealers cover *all* forward business by swaps: whether a dealer will do so or not depends mainly on the remunerativeness of this method as compared with that of the other methods which are available to him. For instance, a dealer who has *sold* francs forward may cover by buying spot francs because he can find a specially attractive form of investment for the spot currency. By covering in this way he will, in effect, be transferring funds from London to Paris for the period of the forward contract (e.g., for two or three months), and he will therefore need to take into account the difference in the respective yields on his money in London and in Paris when comparing the cost of spot cover with that of forward cover. Occasionally, too, the forward market in a given currency is so restricted that it becomes necessary for a dealer to cover his forward operations by spot transactions, in which event the dealer will base his rates for forward transactions *with customers* on the cost of the spot cover.

Usually, however, the forward market is sufficiently active for a dealer to be able to rely on obtaining all cover for his requirements, and, for this reason, he commonly bases the forward rates which he quotes to customers on the ruling rates in the forward market (with an allowance for profit), though this does not prevent him from covering his operations with customers by spot transactions if it happens to be possible for him to do so more profitably than by covering forward.

Fixing Forward Rates for Customers.—It should now be apparent how the banker fixed his rate for selling \$150,000 to the customer in the example on page 250. He knew that he could cover by buying *spot* in the Market at $\$4.85\frac{1}{4}$, and that he could effect a swap at a difference of $\frac{5}{16}$ cent against him. Hence he will actually obtain his forward cover at $\$4.85\frac{1}{4}$ less $\frac{5}{16}$ c. = $\$4.84\frac{15}{16}$. Allowing himself a margin of $\frac{3}{16}$ cent for profit and expenses, *he quotes $\$4.84\frac{3}{4}$ for selling to the customer.*

If he had been asked to buy from the customer he would have calculated that he could cover by selling spot at $\$4.85\frac{5}{16}$ and that the swap would *yield* him $\frac{3}{16}$ cent, so that his forward cover would be effected at $\$4.85\frac{5}{16}$ less $\frac{3}{16}$ cent, i.e., at $\$4.85\frac{1}{2}$. Hence, allowing himself a margin for profit and expenses, he might quote $\$4.85\frac{1}{4}$ for *buying from a customer.*

It will be noticed that, in the first case, the swap *costs* the banker $\frac{5}{16}$ cent, because he is selling forward dollars (which are at a discount)

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against spot. In the second case the swap *yields* him $\frac{3}{16}$ cent, because he is *buying* the cheaper forward dollars against the dearer spot.

Interest is Now a Fundamental, but not the Only, Factor Determining Forward Rates.—Before forward exchange business developed to any considerable extent, relative interest was practically the sole determinant of such forward quotations as were available. Some forward exchanges, in which there were few dealings, were—and indeed still are—quoted in terms of a certain arbitrary difference on either side of spot, that difference depending mainly on the state of the balances of the bank or banks which specialise in the currency concerned. But in the majority of cases the interest factor was predominant. Forward rates on some centres were even quoted on a percentage basis, over or under spot, that percentage depending on the difference between the interest levels in the two centres concerned.

Nowadays, the manner of fixing the rates is rarely as straightforward as this. The quotations are largely dependent on conditions of demand and supply, and they therefore depend to some extent on speculative factors which in turn are determined mainly by psychological influences (see below).

Nevertheless, interest is still the main factor determining the forward rates between countries having stable rates of exchange, reasonable stability of currency and credit, and active, well-organised money markets.

If interest rates in a foreign country are higher than those at home, the forward rate on that country *tends* to be at a *discount*, because dealers endeavour to benefit by the obvious advantage of transferring funds to that country by buying its currency spot and selling it forward. If money earns more in New York than it does in London, the forward dollar will be quoted at a discount; that is to say, the forward rate on New York will be higher than the spot quotation. This means that a dealer buying spot dollars for investment will sacrifice on his covering forward sale some part of the additional interest which he obtains by transferring his money to New York. From another point of view, it means that some part of the advantage gained by transferring funds to New York must be passed on to the buyer of the forward.

On the other hand, if interest rates in a foreign country are lower than at home, the forward rates on that country tend to be at a *premium* because dealers aim at selling its currency spot and buying it forward.

It should not be assumed, however, that the “swap and deposit”

method is used to move funds only to centres where interest rates are higher than they are in the centre where the funds are already employed. For example, if the currency of another centre can be sold forward in London at a high enough premium, funds may be transferred to that centre even though interest rates there are lower than in London or *even though the funds are actually left idle* in the foreign centre, always provided that the premium on the foreign currency more than makes up for the loss of interest involved.

Thus, if spot Reichsmarks can be bought in London at 13½ and sold forward* for three months at a premium of 20 pf., it would pay to transfer funds from London to Berlin, though interest rates might be, perhaps, 1 % per annum lower in that centre. A concrete example will make this clear:—

(Interest rate in London 3 % per annum; in Berlin, 2 % per annum.)	
Cost of Rm. 150,000 @ 13·75	£10,909·091
Interest for 3 months @ 3 % per annum on sterling outlay ..	81·818
Total Sterling Cost	£10,990·909

Deposit of Rm. 150,000 @ 2 % per annum earns Rm. 750 in 3 months.

∴ Proceeds of sale of deposit (Rm. 150,750) @ 13·55 = £11,125·461.

Hence, the transaction shows a profit of £134·552, being £134 11s. 0d.

The foregoing example illustrates what is meant by the statement that a forward rate affords an "interest turn of so much per annum", and it also affords a further illustration of the reasons why forward rates tend to reflect the difference between the interest rates ruling in the two centres concerned. They do so not so much because dealer *deliberately* calculate their quotations upon the basis of differences in interest rates (though that is the only basis on which they can evolve quotations when forward cover is not available), but rather because the demand for and the supply of forward exchange tend to be so adjusted as to fluctuate around that basis. It is, in fact, obvious that so long as the premium or discount on forward currency is greater or less than the figure represented by the difference in the interest rates concerned, then "swap-and-deposit" operations in one direction or the other will show a margin of profit. And provided the Market has confidence in the stability of each centre concerned, these operations will continue until the profit-margin disappears. Thus, in the above example, the chance of making a profit by selling forward marks against spot marks will cause dealers to enter into such deals, and

* At the time of writing there is actually no forward market in Reichsmarks, while the restrictions to which the German exchanges are subject would make the deal impossible.

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as a result the premium will tend to be reduced until the profit margin is eliminated.

The Influence of Demand and Supply.—It may be reiterated that forward rates are fixed by the interaction of supply and demand, and, although in normal times the operations of dealers bring demand and supply into equilibrium at a rate which reflects the difference in interest rates, there are times when this influence is obscured by a heavy one-way flow of funds induced by other considerations.

In general, the course of the forward rates follows fairly closely the course of the spot exchange, and the forward quotation always reflects a *major* movement in the spot rate. But the relation between demand and supply in the forward market is not necessarily the same as that in the spot market, with the result that the forward rates *may* move quite independently of the spot rates. In other words, changes in the relation between the demand for and supply of forward exchange may cause the discount thereon to widen, or may cause the premium thereon to become reduced, although interest rates may remain unaltered. The tendency may be briefly summarised as follows:—

The discount on forward rates will tend to increase, or the premium on forward rates will tend to diminish, when—

- (a) there is an increase in the supply of forward exchange relative to the demand, without a corresponding change in the spot position; or
- (b) there is a decrease in the supply of spot exchange relative to the demand, with no corresponding change in the forward position.

The discount on forward rates will tend to decrease, or the premium on forward rates will tend to rise, when—

- (a) there is a decrease in the supply of forward exchange relative to the demand, with no corresponding change in the spot position; or
- (b) there is an increase in the supply of spot exchange relative to the demand, without a corresponding change in the forward position.

Anticipatory Operations.—Apart from the actual existence of an inducement in the form of a favourable interest level, the mere *expectation* that a favourable movement in interest rates is likely to take

place will be sufficient to affect the forward quotations. Dealers who are constantly on the watch for opportunities to employ their funds more remuneratively will not wait for the actual announcement of a rise in a foreign bank rate if they already have a shrewd idea or reliable information that such a rise is about to take place. They will at once begin to move their balances, and their actions will have the effect of influencing the forward quotations before any such movement appears to be justified by a change in relative interest.

We may illustrate this by supposing that interest rates in New York have for some time exceeded those ruling in London, and that, as a result, considerable funds have been invested in New York by London banks. In these circumstances, the discount in the London forward rate on New York will roughly represent the interest gained by holding funds in the latter centre. Let us suppose, however, that the exchanges now show a strong tendency to move adversely to London, and that the Bank of England loses large quantities of gold.

Clearly, such conditions point to an early rise in the English Bank rate, and astute dealers in London will not overlook the portents. They know that when interest rates *do* rise in London, balances will at once become less remunerative in New York. Hence, they immediately institute a withdrawal of their funds from the States. Clearly, such anticipatory movements, which result in sales of spot dollars against purchases of forward dollars, must lessen the discount between the spot and forward dollar rates in anticipation of the change in interest rates.

These operations will result not only in a lowering of the value of *spot* dollars relatively to the value of forward dollars, but also in an *absolute* fall in the value of spot dollars (e.g., if rates were originally \$3.45 for spot, and 3.50 for three months forward, they may now move to \$3.47 and \$3.49). This movement will probably be accentuated by sales of spot dollars against sterling effected by speculators who anticipate a strengthening of the sterling rate.

The tendency for the margin between spot and forward to disappear will be counteracted, to some extent, by speculative sales of *outright* forward dollars (i.e., sales of dollars for forward delivery) by dealers who "take the view" that dollars will decline in value, and will therefore be purchasable, when the forward contract matures, at a sufficiently cheap rate to enable profits to be made. Hence, the chief effect on the exchange will be a rise in the spot rate.

When the change in interest rates is actually made, more funds will be repatriated, with the result that the discount on the forward

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dollar rate will be still further reduced, and may possibly disappear altogether in favour of a premium.

Anticipatory dealings of similar character often occur between two stable countries, such as Britain and U.S.A., which experience marked seasonal movements. Ordinarily, the heavy transfer of crops from U.S.A. to Europe in the autumn tends to depress the value of sterling in New York at that period, whereas, earlier in the year, the tendency is in the other direction. Many other exchanges have similar definite and well-known tendencies, and such facts necessarily influence the figures at which buyers and sellers are prepared to operate. A little consideration will show that dealers who are well acquainted with the position may make considerable profit by outright sales or purchases of forward exchange, or *time arbitrage* as it is sometimes called, while their actions will, at the same time, exert a steadying influence on the rates of exchange between the two countries, because they tend to minimise disparities in the relationship between supply and demand for forward currency. If dealers consider that, in all the circumstances, forward currency is unduly depreciated in relation to spot, they will buy the forward "outright" as a pure speculation, and their actions in this direction will tend to narrow or even eliminate the disparity between the spot and forward quotations. Needless to say, dealers in the large banks in this country, who carefully avoid taking up a *position* in a currency, are debarred from speculative transactions of this kind.

Speculative Influences on Forward Quotations.—Speaking generally, a big premium or discount on the forward quotation is an indication of the failure of all normal means of equalising demand and supply in relation to forward transactions, and is usually conclusive evidence that speculative influences are responsible for the prevailing rates.

An excessive *premium* in the forward quotation of a foreign currency in London is a fair indication that speculators here are buying that currency forward in the expectation of a marked rise in its value.

But if such a premium fails to reflect the relative level of interest rates in the two centres, it cannot last long *unless* conditions are such that dealers are unwilling to hold their funds in the centre concerned, as will be the case if credit conditions in the foreign country are disturbed; if there are any special risks attached to holding balances in that currency; if the foreign Government is likely to interfere with the free movement of balances, as by restricting foreign exchange operations; or if there is a possibility of financial trouble or political disorder. In these circumstances, the interest factor will be of slight import,

and dealers will require a much larger inducement to undertake forward sales, if indeed they will do so at all. For these reasons, the forward rates for the sale of the currency in question may be quoted at a premium even though the interest rates ruling in that country are much higher than those existing in London. On the other hand, dealers may not be eager to buy the currency for forward delivery and may quote their buying rates at a *discount*. There will therefore be a very wide spread between their buying and selling rates. The continuance of such conditions is likely to lead to a collapse of the forward market, as has in fact occurred in recent years in the case of the markets for those currencies which are subject to onerous exchange restrictions.

If there is a general feeling that a currency will depreciate owing to the prevalence of unsatisfactory conditions in the country concerned, the forward rates on that country will tend to be at a discount, for the anticipation that the currency will fall in value induces buyers to postpone their purchases while speculators will sell forward in the anticipation of being able to provide cover at a better rate. Thus the margin between spot and forward rates tends to widen to such an extent that forward facilities, in just those currencies in respect of which they are chiefly needed, become extremely limited or altogether unobtainable.

Prior to the stabilisation of European currencies, such factors were entirely responsible for the level of the London forward rates on certain Continental centres. When the Paris exchange moved from 120 to 240 and back again in the course of a few months it naturally offered a happy hunting ground for profit seekers. At one time speculators would sell forward francs for all they were worth; at another time their purchases would cause the market to be all buyers.

When the value of the franc was rapidly falling, speculators in this and other countries envisaged a further depreciation. Hence they sold forward in the hope of being able to buy the francs back before the maturity of the contract at a cheaper rate, and thus snatch a profit. The banks, who had, of course, to cover these forward operations, naturally experienced considerable difficulty in finding the necessary cover, and therefore increased their margin of profit and required a special allowance for the added risk of these operations. Consequently, forward francs moved to a heavy discount as compared with spot francs.

In the same way, when the German exchange was depreciating rapidly, forward business became almost impossible, being effected, if

at all, only at an enormous discount. This was because there was a general feeling that the mark would continue to depreciate, and that the longer one waited the less valuable it would become. Consequently, anyone selling for forward delivery had to allow the buyer a considerable discount to cover the probability of loss.

It will be realised that an abnormal speculative selling of a currency for forward delivery places on the banks and other regular dealers the strain of covering the risk by selling spot. For this reason exceptionally heavy forward sales have a tendency to depress the *spot* quotation. Conversely, exceptionally heavy forward purchases lead to abnormal purchases of spot currency and thus tend to raise the spot quotation.

In our own country the abandonment of the gold standard has added an element of speculation to our exchange rates, and, since the speculative dealings in sterling are influenced by anticipated changes in the spot rate rather than by the relative levels of interest rates, forward rates in London are now more liable to fluctuation through influences other than the interest factor.

Moreover, our forward rates tend now to be rather nominal in character because dealers are more careful in taking "names" than they would be in normal conditions, and are not so keen in looking for business.

Specie Points and Forward Rates.—It is interesting to note that, in normal times, the specie points have, to some extent, a limiting influence upon forward as well as upon spot quotations. For example, it has happened that, *when this country was on the gold standard*, and the spot rate, London on Paris, was, say, 124·00, the difference between the interest rates in the two centres was on occasion such as to justify a premium on 3 months forward francs of about 30 c. Yet, as the export specie point to Paris was about Fcs. 123·89, the market forward quotation did not go much beyond 11–12 c. premium. If it had, speculators would have undertaken outright sales of forward francs, in the certainty that they would be able to obtain cover at a profitable rate upon maturity of the contract, if necessary by shipping gold.

Conditions Necessary for Development of a Forward Market.—It will be obvious from what has been said above that a well-developed forward market cannot exist unless there are wide *and free* dealings, and that there must be confidence in the stability of a country if there is to be a good forward market for its currency. For this reason there is at the time of writing no forward market in German currency, as the onerous exchange restrictions effectively preclude forward

operations. Similarly, when a currency comes under the domination of the speculative influence and rates fluctuate wildly, the position may become so unsound as to render forward operations impracticable.

The market in forward sterling abroad is probably the most extensive, while, in normal circumstances, the largest markets in London are in dollars, francs, belgas, marks and lire. Transactions on a more moderate scale are effected from London in the Scandinavian currencies, in pesetas and in Dutch florins. Where, however, there is little or no exchange business in a foreign currency, as, for instance, in the currencies of Roumania, Chile and Latvia, it is not always possible to obtain immediate forward quotations. In some such cases of limited market, banks which specialise in the currencies concerned undertake forward business at arbitrary rates, which they may fix at a certain amount or percentage either side of the spot rate, or may arrange by negotiation.

A country which has no organised short-term market is in much the same position as a centre in which rates of interest are particularly low. The tendency of forward exchange rates on such a centre will be to stand at a premium, whilst the forward rates in that centre on more important centres will ordinarily stand at a discount, even though the relative interest level is not in favour of those centres.

No Forward Rates on the Dominions.—Here it may be observed that a factor which has an important bearing on the difficulties experienced by merchants trading with the British Dominions is the absence of forward exchange facilities in the currencies concerned. Thus an English importer of Australian produce has no means of protecting his exchange other than by an immediate purchase of the necessary remittance (whether a T.T. or a bill of exchange) at the prevailing rate, the objection to such a course being that funds are locked up which could be more remuneratively employed as part of an active turnover. If rates are high there is naturally some disinclination to fix up the contract, and a tendency also to blame the banks for any existing premium on the exchange. It would seem, therefore, that the institution of a forward market in these exchanges would tend to relieve traders of much of their present troubles, while it might also ameliorate some of the difficulties which have hitherto arisen in consequence of the seasonal fluctuations in the trade and exchange of the Dominions.

Actually, the Dominion banks in London have agreed never to quote forward rates of exchange from London, but one Australian bank in London has been known to break away from the "ring" or

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association, and to have dealt in forward exchange on Australia. As the possibility of doing forward business has thus been established, it now only needs the will to make a forward market, and such a step would be decidedly advantageous to commerce.

Although there is no official forward market in Dominion currencies in London it is in normal times possible to buy forward sterling *in the Dominions*. Even on that side, however, there has never been a forward market; no forward rates are published or fixed, and whether the banks will deal or not depends entirely on circumstances, business being in all cases a matter of negotiation between them and the customer.

CHAPTER XII

SHORT-TERM INVESTMENT AND THE RATES OF EXCHANGE

ONE of the most potent factors causing movements in present-day rates of exchange between the leading countries of the world is the transfer of floating balances for short-term investment. The bulk of these balances represent surplus funds in the hands of banks and financial houses which partake of the nature of banks. Occasionally, the Foreign Exchange Market has to cope with large sums, seeking profitable investment abroad, belonging to private individuals or firms. But, as a rule, private balances do not migrate at all readily. They tend to be retained in the centre or centres where they will be ultimately required. On the other hand, the surplus funds in the hands of the banks represent their stock-in-trade. The large exchange banks, especially, must maintain considerable balances freely available for rapid transfer from one centre to another according to the need of their customers and correspondents, whilst many foreign central and other banks regularly maintain part of their semi-liquid investments in the form of credit balances with banks in other leading countries. Generally speaking, these balances may be held in any important centre which maintains the gold standard and which places no restrictions on gold movements, since the removal of the funds from any such centre involves no exchange risk other than the fractional movements within the gold points. Having thus a fairly free choice as to where they will hold their foreign balances, the banks are naturally quick to move them to whichever centre offers the greatest possibilities of return in the form of interest or exchange profit.

The total of the balances which are thus capable of flowing freely from one country to another is extremely large. It is estimated that, just before the crisis of 1931, London held foreign liquid balances to the value of more than £300,000,000, and there is little doubt that very considerable sums are held in New York, Paris and Switzerland.

Obviously, the magnitude of these balances is in itself sufficient to ensure that any important change in their location must have

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pronounced effects on the prevailing rates of exchange. But these effects do not depend on magnitude alone. There are certain other important factors.

First, the development of the modern methods of transacting exchange business by telephone, telegraph and cable implies that huge sums can be moved from one centre to another with great ease and rapidity. Secondly, the necessity of keeping these surplus balances liquid yet remunerative means that bankers are eager to seize any opportunity of employing them to greater profit on a favourable change in the interest level in one of the world's financial centres. The third important point is that these funds are concentrated in the hands of the very people, i.e., the bankers, who are not only specially qualified to secure the most remunerative use for them, but have also the best possible exchange facilities at their service for effecting the necessary transfers from one country to another. Finally, the movement of these balances in response to action taken by the world's central banks has, to a very great extent, taken the place of movements of gold in bringing about that equilibrium necessary to the maintenance of stable exchanges and stable currencies.

In pre-war days, the transfer of surplus funds was almost entirely effected by the purchase of first-class long bills payable in the foreign centre where it was desired to hold the funds. As a result, the rates of exchange, and in particular those between the chief European centres, were very considerably affected by changes in the investment demand of bankers for long bills of exchange. Nowadays, a very large proportion of bankers' floating balances is invested in ways other than by means of bills of exchange, but the investment demand for such bills is still of such importance as to justify a detailed consideration of its objects and ultimate effects on the prevailing exchange rates.

The Transfer of Bankers' Funds by Investment in Bills.—There are four important reasons why bankers in all countries have long recognised bills of exchange, chosen discriminately, as an excellent form of investment and banking security:—

- (1) Bills are a self-liquidating investment since they automatically turn into cash at maturity.
- (2) Payment is secured by the signatures of the acceptor, drawer and indorsers, all of whom are individually liable for punctual payment.
- (3) Bills are easily saleable or discountable owing to their

negotiability and their use as a means of settling indebtedness. (London joint stock bankers do not, however, discount bills once acquired.)

- (4) Bills often yield profits in addition to the interest reckoned to be earned, because (a) a favourable change occurs in the market rate of discount at the foreign centre on which the bills are drawn, or (b) a favourable change occurs in the rate of exchange on that centre.

A certain proportion of the funds of all banks is therefore invested in long bills of exchange, many of which are obtained by discounting them for customers. In pre-war days, London bankers confined themselves solely to London paper, and did not favour foreign bills as investments, but it has long been the practice of Continental bankers to invest largely in foreign, as well as home acceptances. Indeed, the constitution of several Continental central banks (especially those in countries which instituted the gold exchange standard) *requires* them to hold a certain percentage of their assets in the form of liquid securities (known variously as "*gold exchange*", "*valuta*" or "*derisen*") payable in the chief gold centres. First-class bills of exchange on gold standard countries are strongly in demand for this purpose, and, in normal circumstances, the portfolios of the banks in question usually contain bills of various maturities drawn on the principal gold centres.

In this respect the policy of British banks has to some extent been modified by reason of the great extension of their business in foreign exchange, and, nowadays, most of our banks hold in portfolio a considerable proportion of bills drawn abroad. The great English joint stock banks, however, do not care to discount bills drawn abroad unless they bear the signature of a first-class London house. Moreover, they confine their discounts almost entirely to *sterling* bills, and, even though they may negotiate foreign currency bills *for their customers*, they do not as a general rule reckon to purchase such bills *as an investment*. Hence, the portfolio of an English joint stock bank will usually consist almost entirely of sterling bills *payable in London*, a large part being Treasury bills and the remainder bills discounted for customers or bills bought on the Discount Market *after they have been accepted* on this side.

Other London banks, especially the Dominion, Colonial and foreign banks, normally hold considerable quantities of bills *payable abroad*. The Dominion and Colonial banks for the most part hold bills payable

in the Empire countries overseas with which they are specially concerned, and they do not deliberately vary their holdings of these bills as part of their investment policy. On the other hand, the foreign banks in London and the smaller merchant banks hold bills payable both in sterling and in other currencies, and operate rather more on the lines of the Continental bankers.

It will be clear, therefore, that the great part of the *international* investment demand for bills comes from the Continent, and its effects are the more important by reason of the fact that Continental bankers hold their bills only so long as they find it profitable to do so. Their bills are purchased, held or sold from time to time as the exigencies of securing a profit, or averting a loss, may dictate. Consequently, what is known as "the *Continental Bankers'* investment demand for bills" necessarily has an important influence on the rates of exchange, and especially on the rates of exchange between Continental centres and London.

Now the first-class foreign bills of exchange required by bankers for investment may usually be purchased in sufficient quantity in the investing bank's own country. Many of them will be brought in for sale and discount by the bank's own customers, but, if this source is inadequate, others may be obtained from the local bill market. Failing this source, also, the banker who is particularly anxious to obtain bills payable in another centre may instruct his agents in that centre to purchase them locally for him. Bankers in Paris, for example, may instruct their London agents to obtain such bills from bill brokers or discount houses in the City, the cost of the bills being debited to the Paris banker's sterling current account.

One other point may be noticed. In pre-war days the bills thus purchased by foreign banks for investment purposes were, almost without exception, first-class *bills of exchange*, drawn or accepted by banks of known repute. Conditions arising from the War led to a comparative scarcity of such bills, and their place on the Money Markets was largely taken by various forms of Government obligation, such as the Treasury bills of our own country, which, in recent years, have become a highly popular form of investment with many foreign bankers.

We may note in this connection, however, that some of the foreign central banks with which the sterling bill is a popular form of investment are bound under their constitution to hold "two-name" paper, and are therefore not allowed to invest in Treasury bills: hence, a heavy demand from these banks for first-class commercial or bank

bills on London has at times resulted in a finer rate being quoted for these bills than for Treasury bills.

London Bills Preferred.—The main considerations influencing a banker who seeks an investment for his funds are: (1) safety; (2) liquidity; (3) remunerativeness. The preference shown by foreign bankers for the sterling bill must depend, therefore, on these considerations, and we find, in fact, that the London bill satisfies the first two requirements to perfection for the following reasons:—

- (a) London bills, thanks to the reputation for soundness earned by our banks, accepting houses and leading business firms, are readily saleable in all parts of the world, and have, in fact, long functioned as an international currency.
- (b) As London has the most highly organised Discount Market in the world, sterling bills can always be sold in London, and at a good price, while the dealing margin in London is very small, being usually $\frac{1}{32}$ nd or $\frac{1}{16}$ th % per annum in the discount rate.
- (c) As London is the world's leading Foreign Exchange Market, sterling bills can always be purchased at fine rates of exchange and can be sold at equally competitive rates.
- (d) For a long period of years, London bills could always be converted into gold on demand and no other centre maintained such an "open" position in this respect as was maintained by London.

In view of such advantages, it is easy to see why sterling bills (including London bank bills, British commercial bills and British Treasury bills) have long been favoured as investments by foreign central and commercial banks. Since our departure from the gold standard in 1931, it is true, London bills are not so strongly in demand as they used to be, for now the foreigner has not the same certainty that he can get back his funds without loss or that he can obtain gold from London if he requires it, while, so far as foreign central banks are concerned, sterling bills are no longer classed as "gold bills" and are not, therefore, eligible as backing for a currency which is supposed to be on the gold exchange standard. London bills are nevertheless still readily accepted by most overseas banks, and foreign commercial banks still invest part of their funds in them.

Sterling bills of first rank are particularly in demand by *French commercial* banks. As France has a relatively small acceptance business,

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few bills are obtainable in that country, and sterling bills can, whenever necessary, be sent to London for discount at fine rates, whereas French domestic acceptances held by the French banks can only be re-discounted by them with the Bank of France at very high rates, usually 2 % per annum *above* the discount rate charged by that Bank to its customers.

Moreover, as pointed out in Chapter XV, the French banks prefer not to resort to the central bank for re-discount facilities if they can help it. Hence, when they require to increase their liquid funds they turn to their foreign bills or to the foreign balances which they keep available for this purpose. For this reason, although sterling is now off gold, the French banks continue to use sterling bills and London deposits as an outlet for an important part of their funds.

The Investment Yield on Bills.—The third consideration to which we have referred, viz., remunerativeness, is also of importance to a foreign banker who has to estimate the relative advantages of alternative forms of investment. Given two equally safe and liquid types of bill, a banker will obviously place his money in that which is likely to yield most profit. As a general rule, an investment in bills will yield the greatest profit when interest rates are high in the centre where the bills are payable. This rule is subject to several qualifications, which will be discussed later, but we will for the moment consider the way in which the yield or profit on an investment in bills is affected by the rate of interest.

Let us suppose that a banker in France buys from a customer a bill on London payable three months after date. Now the French banker will fix the rate of exchange at which he buys the bill, i.e., his “*long rate*”, at such a level as will yield him a reasonable margin of profit, and, as is indicated in Chapter XXVII, he will calculate this rate from the basis of the T.T. rate by making an allowance for interest for the period of the bill *at the discount rate ruling in London*, together with small allowances for stamp and risk. For instance, if the T.T. rate on London is Fcs. 125 per £1 and discount rate in London is 4 % per annum the French banker will calculate his long rate (ignoring stamp duty) as follows:—

T.T. rate	..	..	..	..	..	Fcs. 125
Less Interest for 3 months at 4 %	..	..	..	..	..	1·25
Long rate on London	..	..	..	..	..	<u>Fcs. 123·75</u>

Now, if the French banker buys a bill for, say, £1,000 at this rate,

he pays out at once Fcs. 123,750. In three months' time, when the bill is paid, the banker will have £1,000 paid to him in London, and, provided the sight rate between London and Paris is still Fcs. 125, he can realise the sterling for Fcs. 125,000. Thus the banker receives an additional Fcs. 1,250 on his outlay of Fcs. 123,750, representing interest for three months at approximately 4 % per annum.

Clearly, then, the investment yield on a purchase of foreign bills held until maturity normally works out at the rate of discount *ruling in the centre where the bills are payable*. It is for this reason that Continental bankers tend to invest their funds in bills drawn on those centres *where discount rates are highest*. Given an equal degree of safety and liquidity, the centre with the highest discount rates will enjoy the strongest demand for its bills.

Here is to be found yet another reason why London bills are ordinarily in keen demand for investment purposes, for, by reason of the "open" position maintained by London, the liability of its reserves to be drawn upon by other nations, and the tendency for the foreign liquid balances invested in London to be withdrawn when confidence fails either in this country or abroad, London rates of discount tend in normal times to rule somewhat higher and to move upward more freely than rates of discount in other world centres which are not so sensitive to prevailing economic conditions.

In the past, this "upward" tendency of London discount rates has been largely responsible for the magnitude of the Continental Investment Demand for sterling bills. Naturally, a Continental banker would not allow his preference for sterling bills to weigh against the prospect of a considerably larger profit to be obtained by investment in some other centre; but, if discount rates were roughly the same in the leading world centres, the London bill would be most sought after, and, in ordinary circumstances, a *rise* in the London rate, by increasing the yield on London bills, would strengthen the investment demand for such bills, and so influence the rates of exchange in favour of this country. When circumstances favour the operation, the Bank of England takes advantage of this effect of a rise in the rate of discount on the investment demand for sterling bills in order to influence the exchanges in favour of this country (see *post*, Chapter XVII).

Naturally, an investment demand for sterling bills will arise only if bankers abroad can foresee a reasonable chance of a *safe* profit, and their outlook in this respect will, of course, be influenced by the general state of credit here and abroad, by the financial outlook and by other important factors. However high the discount rate here, London bills

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will not be bought if a great crisis in Britain is impending, or if we are likely to be suddenly plunged into war with another great nation.

Changes in Discount and Exchange Rates.—So far we have considered only the yield obtained by a banker who buys a bill and holds it until maturity in order to realise the proceeds *at the same rate of exchange*. But, as we have already observed, there are other considerations to be taken into account and, of these, the most important is the possibility of a change in the relevant rate of exchange. If the rate of exchange moves *against* the investing banker before the bill falls due, he may lose part or all of the anticipated profit unless he had taken steps, as explained later in this chapter, to cover himself against exchange fluctuations. Conversely, if the exchange moves in his favour, he may gain an additional profit.

We may illustrate this by referring to the example given on page 268. If, when the sterling bill in question reached maturity, the sight rate between Paris and London had fallen to Fcs. 124 per £1, the proceeds received by the French banker against the £1,000 bill would be only Fcs. 124,000, so that his yield on the bill would be reduced to Fcs. 250, instead of the anticipated Fcs. 1,250. On the other hand, if the exchange rate had *risen* to Fcs. 126, the yield would be *increased* to Fcs. 2,250. Moreover, if, as frequently happens, such a favourable movement in the exchange rate occurs *during the currency of the bill*, it is more than likely that the banker will take a quick profit by discounting the bill at once and selling the proceeds, or, alternatively, by re-selling the bill in his own centre at the higher rates which will follow the rise in the exchange.

Quite apart from the possibility of making a profit from a favourable movement in the rates of exchange, there is also a chance that the banker may benefit from a reduction in the *discount* rate ruling in London. Referring once again to our illustration, let us suppose that the rate of discount in London falls to 3 % soon after the bill is purchased. The immediate effect is to increase the present value of the bill, which, if the exchange rates are unaltered, can now be sold at a better long rate, thus:—

T.T. rate	..	..	..	..	..	Fcs. 125
Less Interest for 3 months at 3 %	..				..	0·94
Long rate on London	..	..	..	..	..	Fcs. <u>124·06</u>
Present value of £1,000 bill	..				..	Fcs. 124,060

Hence, by selling the bill at once the French banker could make an immediate profit of about Fcs. 310.

From the foregoing it should be obvious that, whereas the banker (in the absence of a covering operation—see below) stands equally to lose or to gain from movements *in the exchange rates*, he need not suffer any loss through changes *in discount rates* unless he is compelled for other reasons to make a forced sale. When a *favourable* movement (i.e., a *fall*) in discount rates occurs he can, if he wishes, sell his bills and so gain an additional profit; but when an *unfavourable* movement (i.e., a *rise*) in discount rates takes place, the banker who attempts to realise his bills will do so at a loss because the present worth of the bills will be less. Hence, if discount rates move unfavourably, the investing banker will usually retain the bills until maturity, so earning on his funds the steady yield which he anticipated when he made the investment.

The Continental banker who invests in sterling bills may be considered, therefore, as holding the bills primarily as an investment, but as being ready at any moment to sell them again, either in his own centre or in London, should a favourable movement occur either in the exchange rates or in the discount rates or in both. For this reason Continental bankers will be more ready to buy London bills when discount rates are high in London, for then they know that the rates are more likely to fall than to rise. In brief, the investment demand for sterling bills will be greater if those bills are already cheap than it will be if they are dear. A rise in the discount rate makes these bills still cheaper, and therefore increases the margin of profit which is likely to be made when they become dear again. Cheap bills are more likely to rise in price than to fall, and high rates of discount are more likely to fall than to rise still higher. These factors are naturally very important to bankers, who never know when a sudden demand may be made on them for cash, which may compel them to realise their bills quickly.

Suppose, for example, that sterling has been displaying weakness, with Bank rate at, say, 4 %, and that a rise in Bank rate is generally expected. In such circumstances, foreign bankers will be chary of buying London bills, first because of the weakness of sterling, and, secondly, because they will see no possibility of a quick profit from a change in discount rate, since London rates are more likely to rise than to fall.

But if the Bank rate is now raised to 5 % the demand for London bills will be at once strengthened because: (1) the yield of such bills

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will now be 5 % instead of 4 %; (2) the increased demand for such bills may be expected to strengthen the sterling exchanges, and so to bring about an improvement in the value of sterling; (3) with Bank rate at 5 % and sterling improving, there is a possibility of a reduction in discount rates and the possibility of a resultant profit from a quick sale. The latter influence will become stronger as the sterling exchanges strengthen.

It should now be clear why a rise in the London Bank rate tends to cause an increased demand for sterling bills and so to strengthen the sterling exchanges.

Conversely, a fall in London rates of discount leads to a slackening in the demand for sterling bills. Continental bankers, as has been shown above, hasten to take the profit which accrues from the reduction in discount rates by selling their bills on London at their now higher value. But unless they are prompt in doing this, they are likely to lose the whole of the benefit from the lower discount rates because of a fall in the value of sterling, i.e., the favourable movement in discount rates may be offset by an unfavourable movement in exchange rates. This is the more likely to occur since the actions of the bankers themselves in selling their London bills have the effect of weakening the value of sterling. Here also is the explanation of the fact that, whereas when discount rates in London are high a considerable number of sterling bills are held abroad until maturity, when rates in London fall there is at once an increase in the number of sterling bills coming forward from abroad for re-discount.

Now in pre-war days, when the exchanges between the leading centres were relatively stable and fluctuated only within the gold points, bankers who proposed to invest abroad first formed an estimate or "took a view" of the probable course of the exchanges and were thereafter content to take the risk of any fluctuations which came along. This procedure, for reasons which have been explained, is likely to prove dangerous in these days of widely fluctuating rates, so bankers who make investments (as distinct from speculations) in foreign centres, whether by means of bills or otherwise, endeavour if possible to protect themselves by using the facilities of the forward exchange market.

Summary.—The foregoing explanation is sufficiently important to deserve summarising :—

- (1) Bankers in all countries invest a certain proportion of their funds in bills of exchange.

(2) Continental bankers prefer London bills because—

- (a) Gold can ordinarily be demanded in exchange, if necessary.
- (b) London bills are generally safe and freely saleable.
- (c) The return on London bills is frequently higher than on others.

(3) Bills are purchased for two purposes:—

- (a) To hold till maturity and earn a steady interest on money invested.
- (b) To sell at the first favourable opportunity at increased prices.

(4) Profits are made—

- (a) When rates of discount fall at the place where the bills are payable, thereby making the bills dear, and saleable at a profit.
- (b) When rates of exchange move in favour of the country wherein the bills are payable, thereby raising the value of the bills in the foreign centre.

(5) If the London discount rate rises above the general Continental level, or if Continental rates fall below the London rate, then London bills will normally be purchased for investment.

(6) If reverse movements take place in the rates, London bills will usually be sold, and Continental bills be purchased.

(7) A high discount rate in London therefore causes an extra demand for bills, and has a favourable influence on the exchanges. A low discount rate in London has the reverse effect.

(8) The investment demand varies greatly in intensity, according to the state of credit, the political outlook, trade conditions, and the probable movements of the exchanges and discount rates in London and abroad.

Modern Methods of Employing Surplus Balances.—Conditions arising from the Great War brought about notable changes in the method adopted by bankers and others for investing their surplus funds in foreign centres. The great disturbance of foreign trade necessarily caused a great falling off in the volume of bills created for international settlement, whilst the wide and frequent fluctuations in the rates of exchange and the world-wide failure of credit, rendered investment

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in foreign bills far more hazardous than it had been before. Moreover, the vast increase in the volume of foreign exchange operations conducted by the banks made essential the maintenance of much larger floating balances in foreign currencies to meet the requirements of customers. These balances must be kept absolutely liquid and as secure as is humanly possible, while they must, at the same time, be used so as to obtain the highest available return.

One result of these conditions is that banks throughout the world now employ balances of huge aggregate amount in the chief financial centres, and especially in London and New York, merely by placing the funds on deposit with their agents. Advantage is also taken of the services of agents to employ surplus funds in other directions. Foreign banks and other financial institutions make use of their London branches and agents to purchase not only British Treasury bills but also the bonds and other forms of obligation issued by municipalities and local authorities both here and in other countries. Sums of appreciable magnitude also are employed, through the intermediary of agents, at call or short notice on the world's leading money markets.

Liquid funds may also be moved from one world centre to another by being transferred from the securities of one Government into those of another. Since the War there has come into existence a vast total of securities issued by the Governments of Britain, France, the United States and other countries. These can be turned into money very quickly and without much loss on any of the leading markets, and the proceeds can be made available for immediate investment elsewhere. Naturally, therefore, bankers and others who have liquid funds for disposal make full use of the availability and realisability of these securities, and by moving their funds from one set of securities to another as prudence or panic may dictate, they necessarily exert as profound an influence on the exchanges as is exerted by the transfer of other forms of mobile capital.

Most of this investment business is effected by telegraphic transfer. The New York banker who wishes to invest in British Treasury bills may purchase sterling T.T. to the requisite amount, and instruct his London agent to invest the proceeds as directed. Alternatively, the telegraphic message may instruct the agent to deduct the requisite funds from an existing deposit.

Similarly, a London banker who wishes to take advantage of a high interest rate in a foreign centre, say, in Vienna or Rio, may telegraph his agent in the centre concerned to sell T.T. on him to a stipulated amount and to place the proceeds on fixed deposit for a

given period, say, three or six months. The London banker pays out sterling against the T.T. at once, and the effect is that part of his funds stand on deposit in Vienna or Rio for a specified time instead of lying idle or being employed in London at less profit.

Clearly, this close relationship between the banks in the various centres must be attended by great advantages, and has opened up many previously untried avenues of profit. But the question arises: How is the banker who resorts to operations such as those described in the last paragraph to safeguard himself against the likelihood that the rate of exchange may have moved against him by the time he wishes to bring home his funds? How can a New York banker who has invested, say, \$50,000 in three months Treasury bills, ensure that he can reconvert his sterling into dollars, when the bills mature, without losing all or more than he hoped to gain in the way of interest? Even when the full gold standard is in operation between London and New York, movements of the rate of exchange may take place between the import and export gold points, i.e., approximately 4·89 and 4·85—a total movement of 4 c. in the rate. Such a loss during a period of three months is equivalent to an interest difference of over 3 % per annum, and clearly involves a far greater risk than a banker can afford to take in normal circumstances on an ordinary business operation.

The Application of Forward Exchange.—Fortunately for those who undertake these operations, the risk of loss from an adverse movement in the current rate of exchange can be entirely eliminated by taking advantage of the present widely developed forward exchange facilities and resorting to what is technically known as “*covering forward*”.

A dealer who has invested funds in a foreign centre for a specified period by the purchase of spot currency of that centre safeguards himself against a future loss on the exchange by selling the same quantity of that currency forward, i.e., deliverable by him at the expiration of the period. The New York banker in the case instanced above, who invests in three months British Treasury bills by purchasing sterling T.T., covers himself by selling the anticipated proceeds of the bills three months forward. By so doing, he transfers his funds to London in the secure knowledge that he will not lose anything on their ultimate reconversion into his own currency. Thus the great post-war development of forward exchange business has opened up a new mode of short-term investment, combining the advantages of speed, ease of operation and freedom from risk.

In some cases, as we have previously observed, bankers who transfer their funds to a foreign centre do so as a deliberate speculation

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and are so satisfied with their own "view" of the position that they do not take steps to eliminate the exchange risk. Others, however, are not so content to go unsecured, and they accordingly cover their spot purchases of the foreign currency in which they are investing by forward sales of the same currency to mature on the date when they wish to bring their funds home.

Investment operations of this character are usually effected by means of "swaps"; in other words, the dealer who proposes to transfer his funds puts through a *combined spot and forward operation*, involving the spot purchase of the currency of the centre wherein he wishes to invest his funds, together with a forward sale of approximately the same amount. Looking at the matter in another way, the dealer sells his own currency spot and covers himself by buying it forward, i.e., he effects a swap of spot against forward and, by so doing, has a given sum in the foreign currency placed at his disposal in the foreign centre, while he undertakes to deliver the same amount to the other party at the expiration of the period concerned.

"Swap and Deposit": "Swap and Investment".—Now the rates of exchange which are applied in the swap will depend entirely on the state of the Market, but to the investing banker a highly important consideration will be the manner in which the funds are to be employed in the foreign centre, usually by his agent acting under his instructions. The funds may be placed on deposit with the agent (or with another bank) for three, six or more months, according to the period of the forward sale, in which case the transaction is known as a *swap and deposit*.

Thus a banker in Berlin may buy spot sterling against sterling three months forward (or, what comes to the same thing, may sell spot marks against marks three months forward), and may place the sterling so obtained on fixed deposit with a London bank at an agreed rate of interest. Possibly such a transaction will emanate from a London bank which requires funds for a limited period in Berlin, in which event it may couple an offer of a sterling "swap" to a bank in Berlin with an offer of a stipulated rate of interest upon the deposit of the funds in London, i.e., the London bank may offer to buy spot marks against a sale of forward marks, and to pay a specified rate of interest on the sterling proceeds of the spot sale, until the forward contract matures. Such an operation will be a "swap and deposit" from the standpoint of the German bank, the deposit being held by the London bank with whom the "swap" is executed.

Alternatively, the investing dealer may instruct his agent to employ the funds in the purchase of first-class bills of exchange, or in

the Short-Loan Market, or in some other form of short-term investment—if in London, British Treasury bills; if in France, Bons du Trésor Publique, and so on.

The position is to all intents and purposes the same when a foreign banker buys sterling bills and covers himself against exchange fluctuations by a swap. As explained earlier, this may be done by first selling *spot* in cover and then swapping the spot for forward, by buying spot against a forward sale. Actually, Continental bankers sometimes cover their purchases of London bills by *outright* forward sales, but as a general rule it can be asserted that the purchase of foreign bills is covered by swap operations, or is itself part of a swap operation, as explained above.

Obviously, the profit or loss which the banker ultimately makes on an operation of this kind depends on two factors: (a) the rate of interest earned by his funds in the foreign centre; and (b) the "difference" which he receives or has to give away in effecting the spot and forward operation. In practice, of course, the dealer will have calculated his anticipated profit before actually undertaking the operation, and, since he is covered against any possible adverse movement of the exchange, there is in ordinary circumstances no reason why his expectations should not be fully realised.

On occasion, the difference on the forward rate may be such that a profit equivalent to 7 % or 8 % per annum may be earned on the funds, after making full allowance for the cost of telegrams and for the expense of confirmation by post, even though interest rates in the foreign centre are not specially favourable. During the year 1929, for instance, the operations of bull speculators in the peseta caused the forward rate on Spain to be quoted at a premium of 31 c. per three months, which was equivalent to 4 % per annum on the rate. Since banks in that country were willing to pay 4 % per annum on three months fixed deposits, London dealers could obtain a yield of approximately 8 % per annum by the purchase of spot pesetas against three months forward sales, without incurring any risk worth mentioning.

With a spot rate, London on Madrid, of 32 pesetas per £1, such a transaction worked out approximately as follows:—

Pesetas purchased at the spot rate, per £1	..	..	..	32·00
Interest thereon at 4 % per annum for three months	..	..	..	·32

Total of deposit in three months' time	..	..	..	32·32
Proceeds of forward sale at 31 c. premium				

$$= \frac{32 \cdot 32}{31 \cdot 69} = \text{£}1 \cdot 0199 \text{ approx.}$$

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The return of £·0199 on an outlay of £1 in three months is equivalent to approximately 8 % per annum.

Opportunities sometimes arise involving even higher interest rates, when other countries are especially anxious to secure short-term loans, and offer special inducement in the way of interest on fixed deposits with the object of encouraging investment by foreign banks, thereby affording the latter a clean, quick way of using short-term capital.

Operations involving swap and deposit or swap and investment are now undertaken very frequently, and numerous examples of such transactions are shown fully worked in Chapter XXX.

Outright Purchases for Investment.—Although the majority of modern investment deals are carried out in the manner described, by means of forward operations, this is not the invariable rule. Where, for example, a currency at the time of the investment is unusually cheap to buy, and no doubts are entertained as to its future stability, dealers who wish to invest in that currency and who are not averse to a reasonable speculation will probably do so by outright purchases of spot currency, which they can rely upon being able to sell at a more favourable rate in the future. But it must be realised that the latter type of operation involves "taking up a position", and would certainly not be employed by a dealer who is not accustomed to take speculative risks.

Bills "En Pension" with Exchange Secured.—It will now be clear how foreign bankers who make investments in sterling bills can cover themselves against any risk of exchange loss by selling the anticipated sterling proceeds of the bills *forward*, i.e., for delivery on a date corresponding with the maturity date of the bills. So common has this practice become that a special machinery has developed for carrying out the necessary transactions. This machinery, known as the purchase of bills "*en pension*", is being increasingly used. Suppose, for instance, that a foreign banker wishes to make a three months' investment in British Treasury bills. He will first inquire from a London dealer by telegram or telephone the rate in the foreign currency concerned at which the dealer can sell three months Treasury bills subject to returning the foreign currency, *plus* interest, at the expiration of the period. In other words, the London dealer has to decide (1) at what price he can sell three months Treasury bills; and (2) at what margin in the foreign currency he can sell spot sterling against the purchase of the sterling proceeds at the expiration of the period involved (or looking at the second point from another aspect,

the dealer has to decide at what rate he will buy the foreign currency spot and sell it forward, *plus* interest, at the expiration of the period). The rate actually quoted to the foreign banker is expressed in the form of a percentage yield, i.e., it indicates what interest the latter will earn on his funds after allowing for the cost of the forward cover.

If the rate quoted by the dealer is satisfactory and the transaction is arranged, the London dealer provides the necessary sterling at once (in return for the agreed foreign currency) and invests it in Treasury bills for the account of his foreign correspondent. At the expiration of the three months the London dealer pays out the amount of the proceeds at the agreed rate. Thus the foreign banker will obtain his sterling for the purchase of the Treasury bills (which he will leave in the London banker's portfolio, i.e., "*en pension*" in London), and, by the forward operation, will secure himself against any fluctuations in the sterling value of his currency between the time of the transaction and the time when he has to bring home the proceeds of his operation. He will be certain of earning the agreed yield on his money, without any risk of loss from exchange fluctuations.

The London dealer receives a given sum in foreign currency which he has to pay back (with the interest gained on the Treasury bills and after allowing for the swap cost) at the expiration of three months, so, to cover his own position, he effects a "swap", i.e., he sells the foreign currency spot and buys it for forward delivery in three months' time, so making his position practically secure. He is thus protected against any fluctuation in the rate of exchange, and since he bases his quotation to the foreign banker on the rates at which he can carry out the swap, he should receive a reasonable margin of profit without any risk to himself or any investment of his bank's capital (see also *post*, (Chapter XXX).

CHAPTER XIII

THE BALANCE OF TRADE AND THE BALANCE OF INDEBTEDNESS

Trade Statistics.—The Governments of all properly organised States publish periodical statements setting forth details of the nature, quantity and value of all goods imported and exported by the country concerned during the preceding month, quarter, half-year or year, as the case may be. These statements are compiled from particulars furnished by traders on invoices and other documents to the Customs and Excise authorities, and they afford most valuable information respecting the nature and direction of the country's trade during the period concerned. They indicate whether its exports of goods exceed its imports, or *vice versa*; the main items comprising its exports and imports respectively; the main sources of its foreign supplies and the chief overseas markets for its own products.

In addition to statistics of goods, separate records are maintained by all important countries of the movements of gold and silver bullion across the national frontiers. Gold and silver, by reason of their widespread use as money, are easily the most important commodities in the world, and it is right, therefore, that full and accurate details of their movements should be available.

In our own country, statistics relating to our imports and exports of goods and bullion are published from time to time by the Board of Trade in the *Board of Trade Journal*, and we may note here a point to which we shall have to refer later, that in this country, as in other leading countries where silver bullion is regarded as an article of merchandise (and not, like gold, as a basis of money), it is usual to include imports and exports of silver with the imports and exports of other goods, but to specify gold movements quite separately.

Another important point in connection with our trade statistics is that imports are entered at their C.I.F. value (i.e., their value including original Cost, *plus* Insurance and Freight to the port of *delivery*), but exports are entered at their F.O.B. value (i.e., their value *plus*

any charges necessary to place them Free on Board ship at the port of *loading*). Hence, to afford a true comparison of the relation between the values of our total exports and imports, the total value of the exports should strictly be increased by the *estimated* total of freight and insurance charged in respect of them.

Omitted Items—"Invisible" Exports and Imports.—The statistics of imports and exports which are published by the Board of Trade relate only to the movement of goods and bullion, and contain no record of payments made to or by a country in respect of the many other items which give rise to international payments, e.g., debts arising from the carriage, insurance and finance of goods, debts to be paid or received in respect of the loaning and investment of funds abroad, and debts arising from the transfer of funds by banks and other institutions. The absence of such items from the recorded statistics of trade has led to their being described as *invisible imports* and *invisible exports*. We know that they exist and that, in the case of this and other countries, they amount to millions annually. But we have no precise record of their quantity, direction or value, and we have to be content with the estimates of their value which are made and published annually by the Board of Trade.

The term *invisible exports* is applied to those unrecorded items and services for which payments have to be made *to a country*, and which have therefore the same effect as exports of actual goods, e.g., exports of British Treasury bills purchased by foreigners. They create a foreign demand for the currency of the selling country, and must in the long run be paid for by the purchasing country either in money or in goods. On the other hand, services and other unrecorded items for which a country has to pay are referred to as *invisible imports*, since exports of money or of commodities have to be sent in payment to other countries.

It should now be apparent why the difference between the *recorded* details of a country's imports and exports of goods and bullion during a given period is referred to as the *visible trade balance* during that period. The object is to distinguish this balance from that which is struck after including the estimated totals of the payments to be made and received by the country concerned in respect of the various invisible items referred to.

Invisible Exports and Imports of the United Kingdom.—Actually, the Board of Trade figures (see page 285) disclose that our total imports of goods and silver bullion are not by any means all covered by similar exports. In other words, they show that we have a markedly adverse

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balance of visible trade. Hence the question naturally arises, how do we pay for our excess imports?

The answer to this question is to be found *mainly* in the fact that, on balance, enormous sums have regularly to be paid to this country in respect of our heavy invisible exports. Some of these payments represent accruing *income* or *revenue*, whereas others are *capital* items, i.e., they represent new investment or the realisation of existing investments between this country and other countries. If we apply an accounting analogy, we may say that the income or revenue items are those which pass into and out of our *Income Account* with the rest of the world, whereas the capital items are those which affect our *Capital Account*. Only the former, examined below, are dealt with in the Board of Trade estimates.

Shipping Income.—This item covers the net revenue received by Britain in respect of the services of her mercantile marine and associated industries. It is estimated by the Board of Trade that our net shipping income for the ten years before 1930 averaged about £120,000,000, though for the following three years the average was reduced by the world depression to about £70,000,000. This huge figure includes, besides remuneration for the carriage of goods, compensation to our shipping companies for many other services performed through their agencies in overseas ports, together with sums paid by foreign ships in British ports for bunkers, stores, port dues, etc. On the other hand, deduction is made of the estimated total sums paid by British ships in foreign ports for similar services and of the amounts paid by merchants in this country to shipowners abroad.

Investment Income.—It is unfortunate that bankers and financiers in this country, who have the requisite information available, have not yet thought it worth their while to conduct investigations with the object of providing some reliable data respecting the magnitude of Britain's annual income from overseas investments. The only information so far available is that based on the pre-war researches of Sir George Paish, and the more recent inquiries of Sir Robert Kindersley, who estimated our total holdings of foreign investments in 1930 to be in the neighbourhood of £3,400,000,000. Thanks largely to the efforts of these investigators, the Board of Trade was able to arrive at a figure of not less than £155,000,000 as the *net* income accruing to this country in 1933 from overseas investments, after allowing for deduction of income paid *to foreigners* in respect of their investments here.

From the figures quoted on page 285, it will be observed that

Britain's estimated annual investment income is always considerably in excess of her annual investment of new capital abroad, as evidenced by the total overseas issues on the London Market. For this reason, Britain shares with the Netherlands the distinction of being a *mature* lender, in contradistinction to lenders who are described as *immature*, because their annual capital investment apparently exceeds their current investment income.

Income from Banking, Insurance and Similar Services.—Under this heading are included: (a) the payments made to our bankers, brokers, merchants and accepting houses for commissions and brokerages in respect of services rendered in the financing of trade and the marketing of goods; (b) payments by foreign Governments and corporations for what is called the "service of loans", i.e., payments made to London bankers on account of redemption of drawn or matured bonds, payment of interest coupons, and for the carrying out of the hundred-and-one duties devolving upon the financial house which attends to all this, including, amongst others, the keeping of stock registers, and generally acting as a representative of the foreign Governments for purposes connected with the loans; (c) the premiums paid to our insurance companies, brokers and underwriters in respect of the insurance of goods exported from this country, and in return for marine risks undertaken on foreign account, i.e., for goods which never touch our shores; and (d) commissions paid to brokers and agents on the London Stock Market and produce exchanges for business executed on foreign account. For the year 1933 the total under this heading, after deduction of the sums payable by this country in respect of similar items, was considered by the Board of Trade to be in the neighbourhood of £30 millions, but, as no reliable statistics are available, the estimate is very largely a matter of expert opinion.

Miscellaneous Receipts on Income Account.—Apart from the main items in the foregoing paragraphs, there are a considerable number of other items of less importance from the point of aggregate annual value which give rise to payments by other countries to the United Kingdom. Among these may be mentioned payments made on account of the sale by Britain of second-hand ships; the sums which are sent home by British settlers or emigrants in other countries; the sums remitted on account of profits by the overseas branches and agencies of British commercial houses; royalties on British films and British literature; expenditure by foreign Governments on their diplomatic and consular services, and amounts paid by other countries in respect of tourists' expenditure in this country, giving rise, as we

have seen, to drafts drawn under letters of credit, travellers' cheques and circular notes which have to be collected by our banking institutions from the issuing banks abroad.

Miscellaneous payments of similar kind have, of course, to be made by Britain to other countries, since all the chief commercial nations of the world become creditors, in their degree, of the other nations in respect of such items, but the Board of Trade estimates that the *net* total paid to Britain under this heading averages between £10 and £15 millions, although this figure also is regarded as conservative.

Government Receipts.—For several years past our Government has received appreciable sums from overseas in respect of such items as loans made by it to other Governments, war debts due by European countries, reparation payments made by Germany, the payments made by India for British Government and other charges (e.g., civil and military pay and pensions), and the contributions made by other parts of the Empire for services rendered by the War Office, Admiralty, Dominions Office, Colonial Office and other Government Departments.

On the other hand, payments falling within the same group are made by our Government to other countries (as, for example, the payments made to the United States on account of war debt), and the figures given by the Board of Trade show the *net* payment or receipt under this heading.

Britain's Favourable Balance on Income Account.—The importance of the foregoing enumeration of the various items comprising Britain's invisible exports and imports lies in the fact that the total annual payments which have to be made to our own country in respect of these items are greatly in excess of the total annual payments which she has to make in respect of similar items. Each year, in the Spring, the Board of Trade publishes *estimates* of the balance of payments made and received by this country during the preceding year in respect of invisible items, and these estimates, when combined with the *actual* figures of our *visible* trade, show that the *net* income accruing to us on account of invisible items is *usually* considerably more than is required to redress our large adverse balance of visible trade.

The figures thus published by the Board of Trade for the years 1928-33 are reproduced in the table opposite.

It must be clearly understood that the values here given for receipts from our invisible exports of services are merely estimates, which are in fact based on such slender material that, at the best, they can only be described as approximate. On the other hand, the figures are compiled only after exhaustive investigation and con-

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sideration, so they can be said to give a reasonably accurate (though conservative *) idea of the amount which Britain exacts from the other countries of the world for her services as an international shipper, underwriter, banker and financier.

More important still, they indicate whether we are paying our

United Kingdom Balance of Payments, 1928-33.

(Millions of Pounds.)

	1928.	1929.	1930.	1931.	1932.	1933.
VISIBLE TRADE						
IMPORTS:						
Merchandise	1,195·6	1,220·8	1,044·0	861·3	701·7	675·8
Silver Bullion and Specie	10·2	8·3	8·5	8·4	7·8	10·4
Total	1,205·8	1,229·1	1,052·5	869·7	709·5	686·2
EXPORTS:						
Merchandise	843·9	839·0	657·6	454·5	416·0	416·5
Silver Bullion and Specie	9·2	9·1	8·4	6·8	6·0	5·3
Total	853·1	848·1	666·0	461·3	422·0	421·8
Excess of Imports over Exports, i.e., ADVERSE VISIBLE BALANCE	352·7	381·0	386·5	408·4	287·5	264·4
NET INVISIBLE INCOME						
Excess of Government Receipts from Overseas	15·0	24·0	19·0	14·0	24*	—
Net Shipping Income	130·0	130·0	105·0	80·0	70·0	65·0
Net Income from Foreign Investments	270·0	250·0	220·0	170·0	145·0	155·0
Net Income from Short Interest and Commissions (i.e., in respect of banking and insurance services) ..	65·0	65·0	55·0	30·0	25·0	30·0
Miscellaneous Receipts	15·0	15·0	15·0	10·0	15·0	10·0
Net Receipts from Invisible Items ..	495·0	484·0	414·0	304·0	255·0	260·0
BALANCE OF PAYMENTS -						
Favourable (+), or Adverse (-) ..	+142·3	+103·0	+28·0	-104·4	-56·5	-4·4
Net Exports (+), or Imports (-), of Gold	+12·7	+15·1	-5·0	+35·0	-18·0	-191·0
New Overseas Issues on the London Market	143·0	94·0	109·0	46·0	29·0	38·0
BALANCE UNACCOUNTED FOR ..	+12·0	+24·1	-80·5	-115·4	-103·5	-233·4

* Excess of Government payments overseas.

way, i.e., whether the value of the goods which we sell and the services which we render to other countries is sufficient to pay for the goods and services with which other countries supply us. In this regard it will be seen from the table that, before 1931 (when the great world crisis upset our trade position), the total of the estimated net payments due to us on account of invisible trade was more than sufficient

* Private estimates are usually more favourable to this country than those of the Board of Trade. Thus our unfavourable balance for 1932 (including the war debt payments, £24 millions net) was estimated by the *Economist* to be only £50 millions, whilst the *Financial News* considered that a figure of £44 millions would be the limit of the deficiency.

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to wipe out our adverse balance of visible trade, i.e., we had a *favourable balance of payments on income account*. Since 1931, our net invisible income has so seriously diminished that it has not been sufficient to cover our adverse balance of visible trade, though fortunately the position greatly improved by the end of 1933, when, thanks mainly to the strong measures taken by the National Government, our estimated deficit was reduced to £4·4 millions.

Movements of Gold.—It will be observed that the *net* movement of gold bullion is shown separately after the balance of payments has been struck. One reason for this has already been mentioned, viz., that movements of gold are regarded as transfers of money in all except silver-using countries, and another reason (shortly to be fully explained) is that the movement of gold is one of several forms of “equilibrating factors” or “balancing items”, i.e., transfers of capital which have the effect of redressing a balance between the total debits and the total credits on a nation’s international balance sheet.

Loans made to and obtained from other countries are the other principal forms of balancing items, and such loans may take the form of *long-term loans* (as, for example, the Overseas Issues on the London Market specified in the foregoing table); or *short-period borrowings*, such as the transfer of bankers’ funds for short-term investment, discussed in Chapter XII. It will be explained below that these short-term borrowings, of which the leading countries have in the past maintained scarcely any record, are the main constituent of the “Balance Unaccounted For” in the foregoing table.

A Tangible Balance Does Not Actually Exist as Such.—In examining the above table, it must be clearly understood that figures such as those quoted are compiled by the Board of Trade in this country, and by similar agencies in other countries, merely to provide some indication of the relation between the payments which a country has received within a given period and the payments which it has made. It is entirely erroneous to regard such a balance as existing between one country and the rest of the world at any particular time, or to imagine that a nation, like a trading company or an individual, is in a position to “strike” a Balance, or to draw up a Receipts and Payments Account, covering a given period of time. It is possible for experts to estimate the total debits and credits resulting from a nation’s international business. But experts cannot say that, up to a given date, a country’s nationals have paid away so much and received so much and, therefore, that there is a certain balance which must be immediately paid or received in order to “square” the accounts.

At no time does the relationship between the inflow and outflow of goods, or the relationship between the payments being made and the payments being received on the Foreign Exchange Market, bear any direct relationship to the estimated balance on a country's current account. The relationship between the inward and outward movement of goods is an ever-changing one. On one day, the value of imports may be in excess of the value of exports. On another, the value of exports may be the greater, while it is conceivable that at certain times the two values may be equal.

It used to be stated by foreign exchange theorists that this changing relationship between the inflow and outflow of goods was mainly responsible for the position of the prevailing rates of exchange. But a little consideration will show that the payments being made on the London Foreign Exchange Market at any particular time have not the slightest relation to the quantities or values of the goods which are at the same time passing in and out of the United Kingdom. From day to day, from hour to hour, debts are being paid, set off and cancelled one against the other by the actions of the foreign exchange dealers. But some of these debts concern goods which have passed between this country and others during the previous three months; others are debts incurred in respect of goods which are being paid for in advance, whilst others again represent manufactured goods and rolling stock sent overseas probably twenty, thirty or very many more years ago.

All this goes to show that the payments passing between one country and another during any particular period are in no sense a matter of just one year's trading. They stand for interest and capital repayments of old debts, payments on account of new loans, payments being made out of faith, hope and charity, as well as payments which have the more solid backing of material goods and of services rendered. Some payments represent goods which have long ago been used up or destroyed; some are instalment payments on account of goods in actual course of transfer, while others again are payments in advance for commodities yet to be harvested, mined or manufactured.

Just as there is no relationship between the *total* value of the debts being settled on the Foreign Exchange Market and the actual movement of goods at the same time, so also there is no relationship between the total value of debts in process of settlement and the aggregate balance owing to or by a country on any particular day. Hence a balance of indebtedness if it exists does not in any sense *determine* the rates of exchange. The most that can be said is that,

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where a country has a consistently adverse balance of payments, the tendency will be for its daily payments to other countries to exceed its receipts and for the exchanges to move against it. And the converse will also be true. Moreover, the state of a country's trade and finances naturally influences the view which investors and speculators take as to the suitability of that country as a depository of funds. While, therefore, it can be stated generally that an unfavourable balance of payments *tends* to produce unfavourable exchanges, and a favourable balance to produce favourable exchanges, it is impossible to establish any more precise relationship.

What Becomes of Britain's Balance on Income Account?—

Although the Board of Trade estimates of Britain's annual income account balance vary considerably from one year to another, they invariably showed, when we were on the gold standard, a very considerable balance in our favour. Now, if we looked no further than these figures, we should expect to find that (a) the exchanges were usually very much in favour of this country and practically always at the gold import points, and that (b) we imported from other countries as much gold as they would release.

Actually, the rates of exchange between London and other centres were on the whole favourable to this country, and rarely moved much beyond the gold specie points. Again, while in the course of a year Britain imported considerable quantities of gold, she also exported almost equally large quantities, and on balance there was usually very little in it. Indeed, in some years, she exported far more gold than she received.

Obviously, the exchange position of the United Kingdom in normal times was one of comparative equilibrium. The demand for sterling in other centres kept reasonably close to the supply. How, then, could this position be accounted for in face of the large balance estimated to accrue in our favour each year?

The answer is that Britain, through the unrivalled agency of the London Money Market, annually invested abroad at least as much as the estimated surplus of her receipts over her payments. In other words, her annual excess of receipts due to her heavy invisible exports was counterbalanced by *invisible imports* of securities from other countries in respect of capital issues made in the City of London on behalf of foreign Governments, municipalities and commercial enterprises.

The estimated surplus arising from her income account transactions never accumulated to the extent that other countries had to send her vast amounts of gold or had otherwise to effect payment for

services rendered. The surplus was depleted at least as rapidly as it was earned. The income or revenue was never actually "pocketed"; almost before it was due and received it was earmarked as a loan or capital export to some needy borrower. In other words, our exports of goods and the commercial services which we rendered to other countries were paid for partly by imports of goods and bullion, and partly by imports of securities.

This position is indicated by the figures in the foregoing table which relate to the totals of new overseas issues on the London Money Market. They show that in 1928, for instance, we invested overseas almost exactly as much as our estimated favourable balance of payments. Much the same thing happened in 1929, but for later years there was a considerable difference between the figures, and we see that, when we take the movements of gold into consideration, there was an increasingly large adverse "Balance Unaccounted For", which, in 1933, reached the huge total of £233·4 millions.

The Movement of Short-Term Balances.—Now it will be clear that some part of the "Balance Unaccounted For" in any one year is likely to be due to the incompleteness and inaccuracy of the estimates, which, though carefully compiled, might easily involve a difference of several millions either one way or the other.

But there is actually a far more important equilibrating factor to be taken into account, and that is the movement of short-term liquid balances to which we have referred in an earlier chapter. We have seen that it is not unusual nowadays for vast amounts of short-term funds to move from one world centre to another in response to differences in interest rates and other factors. Now such movements clearly mean that the centre to which the funds are sent is in the position of borrowing them for a short period from the centre or centres from which they are received: in other words, these short-term movements of funds involve borrowing by one centre and lending by another just as much as the issue of a long-period loan; and their effect on the exchanges is just as important. Unfortunately, however, the figures of overseas issues compiled in London and in other centres refer to *public* joint stock issues only, and so exclude not only the vast short-term investments and loans which are involved in the movements of short-term capital, but also any other loans which are made between *private* individuals in one country and those in another.

Nevertheless, it will be understood that these movements of short-term balances are quite capable of making up a large difference between the debit and credit sides of the international account of a

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country such as Britain, which, as we have already observed, acts as the world's banker, and so not only receives large sums from other countries in the form of short-term deposits but also at times has to meet heavy withdrawals of such funds. So we may conclude that the deficit shown on our international account for 1930 and subsequent years (after taking into account our long-term lending) was balanced to a considerable extent by private loans and by short-term borrowings from other countries. And, although in 1930 we apparently overlent to the extent of £86 millions, the possibility was that we had "borrowed" a large part of this sum from other countries mainly in the form of short-term deposits.

We may say, therefore, that although the Board of Trade estimates usually show a fairly large difference unaccounted for between the debit and credit sides of our international account, the account is actually balanced by an increase or decrease of foreign investment in sterling bills, by the movement into and out of London of short-term funds and, to some extent, by an increase or decrease in our holdings of foreign securities. When we are in deficit, we raise our Bank rate to encourage foreign purchases of London bills and the movement of short-term balances from other countries. On the other hand, when we have a balance on the right side, we lower the Bank rate, so encouraging an efflux of funds, i.e., we increase our short-term balances abroad, permit those already with us to be withdrawn, and lessen the attractiveness of sterling bills to the foreign investor. Thus equilibrium in our international balance of payments is achieved by modifications in the relative totals of our invisible imports and exports of capital securities and short-term investments.

The truth of this statement is borne out by an analysis of the conditions ruling in those years when our accounts were apparently very much out of equilibrium. For example, the year 1929, in which we lent only a small portion of our surplus, was a year of intense speculative activity on the New York Stock Market (see Chapter XX), with the result that we had to meet heavy withdrawals of short-term balances from London. These withdrawals no doubt accounted for the difference of £24 millions between the total of our surplus on income account and that of our investment overseas. By 1930, however, the boom on Wall Street had collapsed, and, though London was throughout the year embarrassed by withdrawals of short-term balances on French account, it is probable that the return of balances from New York more than made up for those withdrawals, and so enabled us to lend no less than £86 millions in excess of our surplus on income account.

The year 1931 was, of course, exceptional, for then the failure of

world confidence caused persistent withdrawals of foreign funds from London, and (though there was a large counterbalancing withdrawal of funds from abroad by London banking houses and by the Bank of England and the Treasury against the credits established in their favour in Paris and New York) the withdrawals finally proved so heavy as to force us off the gold standard.

The fact that we abandoned the gold standard did not, of course, mean that we were relieved of the necessity of taking steps to improve our international balance of payments and so ensure a better balance between the supply and the demand for sterling on the world's exchange markets. Actually, our departure from gold brought into operation a number of factors which rapidly improved our position. The depreciation of the pound meant a considerable increase in the sterling value of debts and payments due to us in foreign gold currencies, so that our investors were naturally encouraged to bring home their foreign balances and to realise their foreign investments. Foreigners, too, were encouraged to buy sterling because the pound was cheap in terms of their currencies, and so it was not long before there was a large influx of foreign funds into London and a great increase in the world demand for sterling. At the same time our trading position rapidly improved. With the fall in the value of the pound, Britain became a much better market in which to buy goods, but not such a good market in which to sell foreign products. Hence our exports very quickly increased, whereas our imports fell away, again leading to an improvement in the position of sterling on the world's exchange markets. Ultimately, the effect of the operation of the factors mentioned was to adjust the disparity between our total debits and total credits, and so to bring the sterling exchanges into a position of greater equilibrium.

A Large Balance on the National Income Account Must be Offset by Capital Movements.—This analysis of Britain's international balance of payments will have prepared the reader for the important conclusion that no country, and especially a country which seeks to maintain the automatic working of the gold standard, can for long have a large annual balance of current indebtedness one way or the other. While a nation may have an adverse or a favourable *balance of trade*, i.e., a balance between the total values of her exports and imports of *goods*, it is not possible for any nation to maintain a consistently heavy adverse *balance of indebtedness* in respect of all national transactions; nor, on the other hand, a permanent favourable balance of any magnitude.

We may go even further than this, and say that the *current* in

debtedness of every nation *must* be balanced from day to day. If the nation has more to pay in respect of visible and invisible imports than she has to receive for both types of exports, she *must* either borrow or send gold to adjust the balance. The borrowing may be in the form of a long-term investment, or it may take the form of a short-term loan effected mainly by the transfer of bankers' funds. The latter method does, in fact, operate largely to smooth out the day-to-day fluctuations, and so avoids the necessity of frequent gold shipments.

The Adjustment of the Balance of Trade in a Gold Standard Country.—A root fact about the maintenance of the gold standard is that the exchanges shall be kept as close as possible to the mint parity with any other gold standard country, and that actual movements of gold shall be reduced to a minimum. But neither of these objects can be achieved in the face of a considerable balance one way or the other on the national Current Account. Small adjustments can, of course, be effected without difficulty by imports or exports of gold, but it is quite another matter when it comes to the settlement of a heavy balance. It is more than likely that the available supplies of gold might not be adequate for the purpose, and, even if they were, the movements of considerable amounts of the metal would (in the absence of counteractive measures) have such disturbing effects on the credit machine in both the importing and exporting countries that they will be avoided if it is at all possible.

A favourable balance on Current Account, such as that which has usually been enjoyed by the United Kingdom, or an unfavourable balance, such as Australia, New Zealand and the United States had to face every year in the early stages of their youthful development, must be offset in some way. The national accounts must balance, and that balance will be achieved either *automatically* because the prevailing conditions bring about a change in the direction of trade, or *artificially* by the stimulation of transfers of capital, in the form of either long-period loans or short-period investments.

We will verify the truth of this statement by considering the two cases of (a) countries which have a large adverse balance of indebtedness on income account, and (b) countries, in the reverse position, with a large balance of indebtedness in their favour.

Gold Standard Countries with an Adverse Balance.—Let us suppose that an important gold standard country consistently imports much more than it exports, and does not make up the difference between the values of goods imported and exported by invisible exports of services and other items. What will be the result? Clearly, the

demand for foreign currencies on the country's Exchange Market will tend to exceed the supply, while the supply of that nation's currency on the world Exchange Market will tend to exceed the demand. In either case, the rates of exchange will be unfavourably influenced against the country concerned; the value of her currency in terms of other currencies will tend to fall, and, when the export specie point is reached, gold will be sent abroad.

The movement of gold will, in itself, tend to bring about the necessary readjustment, since it must have at least the same effect as a visible export of goods. But the effect of an export of gold is even more radical than this. As explained in Chapter X, the excess of payments to be made by the country in question must, if it is of a persistent nature, be attributed to the fact that prices in that country are unduly high compared with prices in other gold countries. Now the export of gold will tend to bring about a lowering of domestic prices, since it leads to a contraction in the volume of currency and credit. As a result, the country becomes a less favourable market in which to sell but a better market in which to buy. Imports of goods are therefore discouraged and exports of goods are encouraged. This position is accentuated because the producing classes and exporting interests have to curtail their expenditure, part of which will be on commodities and part on investment. Purchases of foreign-produced goods, amongst others, will therefore diminish, while foreign investment will be decreased. The slackening in the demand for home-produced commodities makes the home markets less prosperous, credit contracts and the value of the currency rises. Its external purchasing power improves, and thus the general tendency is for the exchange to return to the mint parity, for the adverse balance of trade to be corrected, and for a position of more permanent equilibrium to be established. In practice the adjustment will be very gradual, and a very serious "drain" of gold will be needed before the price level is affected.

The tendency towards a lower price level will probably be strengthened by the action of the central bank in the country concerned, because that bank, seeing its gold reserve diminishing, will probably raise its rate of discount. As a result, interest rates in the country as a whole will tend to rise, so encouraging the inflow of foreign funds for investment and tending to strengthen the country's exchanges. If this occurs, the painful readjustment of price levels which is necessary before the trade balance can be rehabilitated may be postponed for a time with the aid of loans from investors in other countries.

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In certain circumstances it is better that the balance should be adjusted by borrowing rather than by a reduction of imports, for the country concerned may not be able to live and to prosper without the help of imports from other nations. She may be a war-impooverished State like Germany or Hungary in 1918-28, endeavouring to get on her feet after a great war or an internal revolution. She may be a young country, like Australia or New Zealand or Brazil, seeking to develop her resources and build up her economy. Imports from abroad are in such circumstances essential, whereas exports, for some time at any rate, must be relatively small. If investors in other countries are willing to invest their money in the debtor country, the inward flow of capital will permit of a continuance of the disparity between imports and exports, and yet bring about a position of equilibrium between the nation's debits and credits.

It must not be imagined that the borrowing here referred to is undertaken deliberately by the Government of a country with the object of attaining a balanced international account. On the contrary, the bulk of such loans are usually issued by trading and financial undertakings, and are utilised in financing productive developments, the revenue from which should provide the wherewithal to meet the annual interest and sinking fund payments. But, as has been pointed out in Chapter X, there is a limit beyond which it is not prudent for a country to borrow, whether for commercial or for Government purposes, and when this limit has been reached, if the balance of payments is still unfavourable, it is better that the adjustment of prices should take place rather than that the country should encumber itself with an incubus of debt.

Gold Standard Countries with a Favourable Balance.—Economic forces operate in the reverse circumstances where a nation's commodity exports regularly exceed her commodity imports, or where, as in the case of Britain, a nation's adverse balance of visible trade is more than counterbalanced by the excess of current payments to be received on account of invisible exports. Clearly, in the absence of other correctives, the position in such a case will be that the exchanges are influenced in favour of the country concerned, and that she should receive considerable quantities of gold from other nations in settlement of the balance in her favour.

But the inflow of gold will not continue indefinitely. Apart from the fact that the available supplies of gold may not be adequate, forces will be set in motion which tend to effect a closer balance between payments and receipts. The constant excess export of goods

and the inflow of gold eventually cause prices to rise and the value of money (i.e., gold) to fall. The country becomes a better market in which to sell but a less favourable market in which to buy. Hence imports are encouraged and exports are discouraged until the direction of trade is changed and a new equilibrium established at a price level readjusted to world conditions.

All this presupposes the absence of other correctives, but just as a country with an adverse trade balance usually resorts to foreign borrowing in order to effect equilibrium between her payments and receipts, so also a nation with a favourable balance usually equilibrates the position by investing the surplus overseas.

If a nation has an excess of exports over imports, the producers of the exports will receive relatively increased profits and wages which they will want to spend. The same applies to those in receipt of lucrative incomes from invisible exports. Part of this income will be spent on commodities and part on investment. The wholesale and retail dealers sell more goods and they also find their incomes increased. Hence they, in turn, spend more on commodities or on investment. Any additional amount spent on foreign-produced commodities will naturally tend to rectify the disparity between imports and exports. The part that is applied in investment may be invested at home, but normally there is a greater increase in attractive investments overseas than there is at home. Hence the greater proportion of the available money will be attracted abroad.

The process continues until the excessive exports are fully covered either by imports or by external investments. If the standard of living is already high—as it is in Britain's case—the proportion spent on investment will be relatively greater than that spent on commodities. The tendency is for the excess of exports to be invested abroad, and with each addition to the total of overseas investments, the annual income therefrom increases and so adds to the future surplus available for the purpose.

The readjustment will probably be quickened by the action of the central bank, which, finding its gold reserves growing unduly large, may lower its re-discount rate. As a result, interest rates generally will tend to fall and investors in the country concerned will seek an outlet for their funds in other countries. In the first place, there will doubtless be a movement of funds for short-term investment abroad, but, if the favourable balance continues, it is quite easy to see that there will be every encouragement for funds to be transferred to other countries for permanent investment.

Inconvertible Currencies and the Balance of Indebtedness.—If, then, a *gold standard* country has a consistently favourable or unfavourable balance of payments, the *ultimate* adjustment is provided by the movement of gold, which causes internal prices to be brought into line with prices in other countries. Where a country has an *inconvertible* currency, however, there is no such adjustment.

If such a country has a consistently *adverse* balance, its exchanges will depreciate until they reflect the purchasing power parity. The fall in the external value of the currency will encourage exports and will discourage imports, and so tend to redress the balance of indebtedness. *Thus the exchanges tend to adjust themselves to the price level, whereas in the gold standard country, prices tend to adjust themselves to the mint parity.* Of course, the downward adjustment of exchange rates may be postponed for a while by borrowing operations, as in the case of a gold standard country, but, as stated above, there is a limit to the extent of safe borrowing.

If the country has a consistently *favourable* balance, the exchanges will tend to move in its favour until they reflect the purchasing power parity, though here again the adjustment may be suspended so long as the country lends its surplus abroad.

Borrowing and Lending Effect Equilibrium.—Thus we conclude that, if a nation's annual transactions involve a large standing deficiency of receipts as compared with payments, she will be compelled to remedy the position by borrowing abroad, for either short term or long periods, or, what comes in effect to the same thing, she will be forced to raise credits abroad out of which to make the excess payments. If, on the other hand, the transactions of a country result in a consistently heavy surplus of receipts, the position will be equilibrated, in the absence of other measures, by loaning the surplus to other countries for development and other purposes.

An individual whose income exceeds his expenditure ordinarily invests the surplus in securities which by their yield of interest increase still further his future income. So also a nation whose annual international business brings in considerably more than she has to pay, invests the surplus in other countries. She pays away the excess in return for securities which she imports, and by so doing achieves that balance between her payments and receipts which is so essential to the maintenance of stable exchanges and a stable price level.

CHAPTER XIV

BALANCING A NATION'S INTERNATIONAL ACCOUNTS: EXCHANGE RESTRICTIONS AND CONTROL

IN the preceding chapter it was shown that it was impossible for a nation *permanently* to maintain a heavy adverse or a markedly favourable balance on its international accounts, and that, although an abstracted statement of visible and invisible items (including any gold movements) might show a balance one way or the other, that balance must, in fact, be offset by lending or by borrowing. From the standpoint of ultimate equilibrium it does not matter whether the nation lends or borrows for long or for short periods; but there is a vast difference between the two from the standpoint of their immediate effect on the prevailing rates of exchange. To understand why this is so, we must revert briefly to the important question of relative interest rates discussed in Chapter XII.

Central Bank Influence on the Exchanges.—The control of interest rates in most countries is vested in the hands of a central bank. In our own country we have the Bank of England, in Germany there is the Reichsbank, and in the United States the Federal Reserve Banks which collectively perform the central banking functions for that country. The central bank exercises its control over the prevailing rates of interest through its power to force all other interest rates in its own centre to follow the movements in its own rate of discount (i.e., its rate for discounting first-class bills of exchange), which is fixed according to the dictates of its policy and usually in close consultation with the Government of the country concerned. The actual mechanism by which this result is achieved in this country will be considered in detail in the next chapter, but it will be apparent that, if the central banks are able to control the rate of interest in their own centres, they are in a position to influence the inflow or outflow of floating balances for short-term investment, and can accordingly bring about considerable modifications in the prevailing rates of exchange.

The Keynotes of Central Bank Policy.—What, then, determines the policy followed by the world's central banks in fixing their rates of discount and so the rates of interest in their respective centres? There are two main objects. The first is to maintain a steady internal price level by so regulating the volume of credit that internal trade and industry shall be disturbed as little as possible by changes in the value of the circulating media of payment, and so that the foreign exchanges shall not be disturbed by changes in the purchasing power of the currency. The second object is to maintain stability of the external exchanges so that the country's foreign trade may be smoothly conducted on a certain and secure basis.

In seeking to achieve these two objects, most central banks pin their faith to the gold standard. This, as we have seen, implies the maintenance of both the internal and external values of a currency as nearly as possible on a par with the value of gold. Internally, the circulating currency must be exchangeable for gold on demand. Externally, the exchanges must be kept as close as possible to the mint parities with other gold-standard currencies, and fluctuations in the rates of exchange must be confined within the gold points by the removal of all restrictions on the import and export of the metal.

Ensuring Temporary and Permanent Equilibrium.—But the adherence to the gold standard implies something more fundamental than this. It implies, first of all, that there shall be a position of reasonable *temporary* equilibrium between the demand for and supply of the currency concerned on the Foreign Exchange Market, so that the rate will not move too far from the mint parities with other gold currencies. Secondly, it implies that there shall be a position of more *permanent* equilibrium on the nation's international account, i.e., that, in the long run, a nation's credits shall balance its debits.

It is the function of the central bank to ensure that these positions of both temporary and more permanent equilibrium are achieved. Temporary or *momentary* equilibrium is automatically attained, as in any market, by reason of the fact that neither demand nor supply is a fixed or determinate quantity. They are both quantities which adjust themselves through the mechanism of price so as to produce equilibrium. In other words, if demand at any moment tends to outrun the supply—as indicated by the offers of currency for sale—equilibrium will be brought about by a rise in the price (the rate of exchange) which will induce more sellers to come forward.

Buyers and sellers of currency can be divided broadly into two classes: (1) those who require currency in order to effect essential

payments or who have currency coming to them and wish to convert it at once; and (2) those who make a business of buying and selling currency.

The first class is made up chiefly of persons who have to receive or make payments from and to foreign countries on account of the visible and invisible items of trade, i.e., exporters, importers, insurance companies, shipping companies, and, to some extent, investors. The second class comprises professional dealers in foreign currency who are willing to take up a position in a foreign currency. It therefore excludes our large joint stock banks, who always aim at keeping their position square, though, as active dealers in the market, they play their part in fixing prices and in fixing the relation between spot and forward rates, as by selling spot against forward and *vice versa*. Other professional dealers, however (especially the foreign banks), are less averse to taking up a position; and it is their operations which fulfil the equilibrating function, as when they offer foreign currency (e.g., in the form of finance bills) when it is in demand and dear, and purchase foreign currency to replenish their balances when it is in supply and cheap.

The members of the latter class act as buffers; they provide the demand or supply which is needed to effect complete equilibrium; but they do so only at a price. This means that, if demand from the first class is far in excess of supply from that class, it will be necessary for members of the second class to provide the additional supply, and they will do so only if a higher price is paid. Hence, momentary equilibrium is attained through fluctuations in prices, i.e., in rates of exchange, and, so long as these fluctuations do not go too far, movements of gold and interference by the central bank do not become necessary.

If, however, the exchange rates continue to move until they reach the specie points, and so make profitable either the import or the export of gold, financial houses, banks and bullion dealers immediately take steps to arrange such transfers, and their actions in this direction tend to balance the position, i.e., the automatic corrective action of the movement of gold is engendered by the efforts of the banks to obtain a profit from the disparity between current demand and supply on the exchange market.

Ultimately, the central bank itself may intervene with the object of expediting the adjustment of demand and supply. In a gold exchange standard country, the central bank does this by holding itself open either to buy or to sell foreign currency on demand at

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fixed prices. In a gold standard country, the central bank may itself undertake the movement of bullion, or it may buy and sell exchange as may be required, or it may resort to other measures to influence the volume of credit and so rectify the position.

Balancing the National Debits and Credits.—As a general rule, the result of the operation of these factors is that the adjustment of the debits and credits which go to make up a nation's international accounts is brought about automatically, we might almost say unconsciously, by various forces which come into play. The interminable operation of debt settlement which goes on from day to day and from hour to hour between one nation and the rest of the world is a restless process of creating and extinguishing debt tending constantly to square the totals of that nation's receipts and payments.

When, however, the national balance of payments remains consistently adverse or consistently favourable, all ordinary means of remedying the position are doomed to failure. Radical methods must be applied to correct the disturbance of equilibrium. Again, it must be emphasised that this disturbance is not revealed because a nation from time to time extracts a Balance Sheet or an Income and Revenue Account, like an individual or firm, and then and there decides that special action must be taken; that, if the balance is adverse, the time has arrived for a foreign loan to be obtained, or, if the balance is favourable, that arrangements must at once be made to lend the surplus abroad.

On the contrary, the disturbance of equilibrium is indicated by various symptoms which unmistakably reveal the trouble to those responsible for the application of the recognised remedies. In normal times, the movements of the principal gold exchanges, in particular, unfailingly indicate the state of a nation's balance of payments, and if the exchanges of a gold-standard country remain in such a state that gold flows inwards or outwards in large quantities, it becomes clear that active interference is called for by those responsible for the nation's monetary affairs.

In normal circumstances, this interference takes the form of action by the Government or by the central bank, and most usually the latter, with the object of modifying the relationship between the demand for and the supply of the national currency on the world's Foreign Exchange Markets, by (a) encouraging the creation or the extinguishment of debt, and/or (b) bringing about a change in the purchasing power of the currency through a suitable adjustment of credit.

Now the second of the above methods takes some time to operate.

Changes in the value of a currency, i.e., in the general level of prices, are brought about through the actions of traders and consumers, through the interplay of supply and demand—processes far too slow in operation to save the situation in a country which is being denuded of its gold reserves and is suffering from other effects of consistently adverse exchanges. They are equally unsuitable as a quick remedy in the case of a country which is being flooded with unwanted gold.

The first method, involving the encouragement of the creation or extinguishment of debt, has no such disadvantages. It is a remedy which can be applied with the greatest ease and one which is capable of extreme rapidity of action. To explain more easily why this is so we will confine our attention for the moment to the case of a country which has accumulated a large adverse balance on current account, and assume that the important foreign exchanges have become dangerously unfavourable through the consistent excess of foreign supplies of her currency in relation to the demand, or, what is, in effect, the same thing, through the consistent excess demand on her own market for important foreign currencies.

In these circumstances, adjustment can be effected in one of two ways: (a) the supply of foreign currency available for making payments abroad may be increased; or (b) the foreign demand for the country's own currency may be increased. Now the supplies of foreign currency wherewith to make payments abroad can be increased by exporting gold. But, with the possible exception of a country which is a large producer of the precious metal, this is a method which is limited by the supplies available and is obviously one which cannot be continued indefinitely.

The Government or central bank may, therefore, endeavour to increase the available supplies of foreign currency by borrowing money abroad, either by floating long- or short-period loans or by establishing credits in other countries; or, it may adopt the other alternative, and take steps to increase the foreign demand for its own currency.

The first of these alternatives, i.e., borrowing money abroad, is one which has been very widely adopted during recent years for the purpose of equilibrating national accounts. But this method also has its disadvantages. It takes a little time to arrange loans in other countries, while borrowing abroad is not always desirable, or even possible.

We are thus thrown back on the other alternative of increasing the foreign demand for the currency of the country concerned, and

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it is here that advantage is taken by the world's central banks of the existence of the investment demand already explained. If the trend of the exchanges and the available statistics indicate that the country has accumulated an adverse balance on her international account, the central bank raises its rate of discount in order to attract foreign balances for short-term investment and thereby induces a foreign demand for the nation's currency.

In actual fact, of course, the transfer of such balances is merely a form of short-period loaning, so that this method is similar to the others in that the country endeavours to remedy its position by borrowing abroad. But its great advantages of immediate operation and extreme ease of application will be apparent from the earlier explanation of the methods employed by the banks for transferring their floating balances from one centre to another.

Similar, but reverse, action may be taken by the central bank when the symptoms indicate that a nation has accumulated a heavy favourable balance, and it is desired to discourage the inflow of gold and the expansion of credit. The central bank lowers its rate of discount with the object of encouraging the outflow of short-term balances.

It should now be clear that it is the transfer of short-term funds which provides the adjusting factor between current demand and supply on the Market. We have spoken of the professional dealer who "takes up a position" in a foreign currency, in response to a favourable movement of the rate, as being responsible for providing the necessary adjustment—acting as a buffer. In effect, by taking up a position he is making a transfer of funds. If a dealer buys francs in London, to hold them in Paris, he is making a short-term loan to Paris. If a Paris dealer buys sterling in a similar manner, he is making a short-term loan to London. It is to encourage or discourage these operations that the central bank alters its rate of discount.

The Importance of the Transfer of Floating Balances.—It may be reiterated that the magnitude of bankers' funds and the ease with which they can be transferred render their movement the most potent of present-day influences on the rates of exchange in the short period. Clearly, the sudden transfer of funds to the amount of several millions sterling from London to New York, in order to take advantage of a high interest rate in the latter centre, may be quite sufficient to cause a marked movement in the dollar-sterling rate of exchange and enough to neutralise or entirely reverse the effect of any other influences.

As we have already observed, the importance of the movement of bankers' balances has been accentuated with the adoption of the gold exchange standard by several countries, necessitating the holding by their central banks of liquid reserves abroad, usually in any of two or three centres. Naturally, these balances tend to flow to the centre where they can be most remuneratively employed; while they are immediately withdrawn from any centre about the stability of which there is the slightest doubt. Thus, in any period of financial uncertainty, unsettled conditions are aggravated by the action of central banks in withdrawing these balances and so giving a lead which others do not fail to follow. In fact, the recent growth in the activity of the international market in short-term money has tended to make international finance far less secure. Bankers' funds are held mainly in a few relatively stable centres such as London, New York and Paris. These centres are thus placed in an extremely "open" position, since their whole financial stability can be upset by the action of foreigners who have deposited funds with them. Just as the soundest bank could not continue to pay out funds in the face of a considerable "run", so no centre can maintain the stability of its exchanges if its creditors all take it into their heads to demand repayment at once, as they are bound to do when there is a marked failure of confidence.

Dangers of "Borrowing Short" and "Lending Long".—This is precisely what happened to Britain in 1931, when the system of equilibrating our international accounts by attracting short-term balances to London proved to be full of danger. At the best of times the presence of these balances increases the sensitiveness of our exchange position, especially in relation to monetary conditions in the United States and France, and, in times of crisis, our "open" position tends to throw a great strain upon our financial stability. If there is any approach to panicky conditions abroad, one of the first actions of foreign bankers is to get their funds home to strengthen their domestic reserves, while, if any event shakes foreign confidence in our stability, foreigners naturally hasten to repatriate their London deposits or to move them to some other centre. In such circumstances, London is placed very much in the position of a banker upon whom there is a "run", and the offer of relatively high interest rates may be powerless to stop the withdrawals or to attract transfers of fresh balances to adjust the position.

London has been even more unfortunately placed than a banker subjected to a "run"; for a banker always invests his funds with an

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eye to liquidity. He does not, if he is a good banker, borrow "short" and lend "long". The same rule should be observed by a nation if it wishes to avoid difficulties. But the position in regard to short-term lending is complicated by the fact that, although the lending is referred to as lending *by one centre to another*, it is in fact conducted not by the nations or the centres, but by *individuals*, and in the past no co-ordinated steps have been taken in London or elsewhere to maintain a liquid position.

When foreigners send funds to London they merely buy up sterling and either deposit it at interest with a London banker or utilise the services of a London banker to invest it for them. The London banker observes the recognised banking precept of liquidity, but, as he has accepted a *sterling* deposit, he concerns himself only with his ability to repay that amount of sterling should he be called upon to do so. The transaction does not involve him directly in a foreign exchange deal, so he does not concern himself with the question of reconverting into foreign currency the sterling which has been placed on deposit with him.

Before the crisis of 1931, no special action had ever been taken by our bankers to accumulate foreign short-term claims to offset foreign-owned sterling balances, so, at the time of the crisis, London was in the position of having the custody of large funds which were repayable by her on demand or at short notice, but of having inadequate reserves of easily realisable foreign claims that could be used for repaying the sterling balances in the event of a "run".

In the summer of 1931 there was a sudden rush on the part of foreigners to withdraw the funds which they had deposited with London banks and financial houses, and such difficulty was experienced in coping with these withdrawals that eventually we had to suspend the gold standard (see Chapter XX).

Short-Term Movements Hide Other Factors.—Another disadvantage of short-term lending as a balancing factor is that, as no statistics are made public regarding transfers of funds, an adverse trading position is no longer automatically disclosed by movements of gold. A country can overlend to a serious extent without the position becoming generally known, as was actually the case in Great Britain before the 1931 crisis. Between 1929 and 1931 our trading position had been getting gradually less and less sound, and it was not realised, until disaster came upon us with alarming suddenness in the autumn of the latter year, that we had for some time been lending heavily abroad against a "surplus" which no longer existed—or which was, at best, but a shadow of its

former self, being composed largely of foreign funds moving into this country for short-term investment.

The development of the system of transferring liquid balances has also had the effect that seasonal movements of the exchanges, as, for instance, those between London and New York, are far less marked than they used to be, partly because the banks make *anticipatory transfers* so well in advance that fluctuations which would otherwise occur are smoothed out, and partly because the seasonal movements are obscured by the magnitude of the bankers' transfer operations. In the result, people are led to believe that the trade and exchange position is better than it really is, and only when some disturbing factor causes a reversal of the short-term movement is the true position revealed.

Experience has shown, too, that large transfers of funds can be made with startling suddenness, and, in this respect, there is a considerable difference between the influence of such transfers and the influence of other factors affecting the exchanges. The influence exerted by the direction of trade on the state of the exchanges is necessarily one which takes time to operate. The same applies to a change in the purchasing power of a currency: the effect is not immediate. The change must work itself out through the actions of buyers and sellers—through the interplay of legitimate business and speculation. But it is quite otherwise with movements of large floating supplies of loanable money. Almost before the announcement appears that the rate of interest in an important centre is to be raised by 1 %, bankers are frantically cabling and telegraphing their agents with the object of effecting the necessary transfer of funds to the centre concerned.

If the movements took place solely in response to such economic conditions as are evidenced by changes in the rates of interest, the position would not be, as it has become, a source of great anxiety. Unfortunately, however, such movements are influenced by innumerable factors of indeterminable importance. Vast funds may be moved in response to the merest change of sentiment. They may be transferred at a moment's notice from one centre to another as prudence or panic dictates. They may be scared away from a country by a premature deduction from a political declaration or by the publication of the annual Budget figures. They may be attracted by nothing more definite than the possibility that the country to which they flow is likely to secure some degree of war debt relief or other financial benefit. The magnitude of these operations is such that the normal

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exchange mechanism is liable to be upset by them unless special arrangements are made to meet them, and it is no exaggeration to say that at the present time the transfer of funds often completely obscures all other exchange influences, particularly in the case of the exchanges between the great financial centres, London, New York, Paris, Amsterdam, Basle and Berlin.

The Transfer of Balances Largely Replaces Gold Movements.—To a very large extent, therefore, the transfer of floating balances takes the place of the movement of gold. In fact, the maintenance of the gold standard to-day depends essentially on the existence of these large sums of liquid funds, and on the fact that they move very easily from one centre to another, in quick response to central bank policy as epitomised in changes in the ruling rate of discount. Such transfers not only economise the use of gold; they are also quicker, safer and more economical than movements of the actual metal. The movement of credit balances involves no risk of loss, no loss of interest, and practically no expense, while it eliminates the loss through abrasion, etc., which takes place on a transfer of gold.

But it must not be imagined that the conditions which have here been described relate only to gold currencies. On the contrary, they apply with little modification to all currencies. The rate of exchange is in every case fixed by the interaction of supply and demand, and equilibrium is effected by movements in the rate of exchange to that level where demand equals supply. The great difference, however, is that, whereas between gold currencies the fluctuations are limited by the specie points (any movements beyond these points being corrected by the shipment of gold), the rates of exchange for a currency which is *not* linked to gold are free to move to an unlimited extent. The equilibration of demand and supply is again brought about by the movement of funds, but, where a heavy disparity exists (by reason, for instance, of an adverse balance of payments), it may require a violent movement of the rate of exchange to induce the necessary transfer of funds.

The Balance of Trade Theory is no Longer Tenable.—If the foregoing analysis of the position is in accordance with the facts, we must admit to have reached a point in our explanation of the theory of foreign exchange which is in almost direct opposition to the view which has so long been held that the rate of exchange between any two countries is mainly determined by the balance of indebtedness *on trade account* between those countries.

We can admit that the daily or hourly rate of exchange is influenced

by the relationship between the demand for and supply of foreign currency required to make international payments on trade account. But that influence is only one of many, and is liable to be neutralised by one or more of several other factors. Moreover, the influence attributable to trade settlements at any particular time bears only a slight relationship to the *current* balance of trade indebtedness between the countries concerned. It has no relationship whatsoever to the *aggregate* balance of indebtedness outstanding or accumulating between one country and another, or between one country and the rest of the world.

Primary Producing Countries.—The exchanges of the primary producing countries (such as Australia, New Zealand and Argentina) differ somewhat from those of the more highly developed countries (e.g., Great Britain, U.S.A., France, Holland and Switzerland) in that they are still fairly closely related to their respective *trade* balances, mainly because their financial mechanism is not of international importance, and because their currency has not become the plaything of international bankers and speculators. In the newer countries there is little or no movement of funds for short-term investment; but their exchanges are, of course, subject to the influence of such *invisible* imports as the payment of insurance premiums and shipping freights, and, above all, the payment of interest on the heavy loans which these countries have raised in the past for development purposes. The raising of new loans also has its effect on these exchanges, but these operations are nowadays less frequent than they used to be.

An important result of these conditions is that the exchanges of these countries are usually closely controlled by the leading trading banks, generally backed up by the Government, and over a period the rates of exchange tend to move in close sympathy with the direction of trade, day-to-day fluctuations being smoothed out by the operations of the banks.

INTERNATIONAL ACCOUNTS OF THE UNITED STATES.

As a result of the War, the United States ranged herself alongside Britain as a great creditor nation, annually loaning or investing enormous sums in other countries throughout the world. Apart from the fact that she regularly exports to other countries more than she imports, the annual balance of invisible payments on current account, mainly in respect of income on foreign investment, is com-

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puted to be heavily in her favour; so heavy indeed that the United States has accumulated vast reserves of gold, which, during the years 1914-28, reached such proportions that the Federal Reserve authorities had to take drastic action to prevent a dangerous rise in internal prices. The position was accentuated by the heavy payments which had to be made on account of war debts by the European Governments to the United States, and on account of debt services in respect of loans made by the United States to Europe, and particularly to Germany, in the years after the War. Transfers on this account caused America's balance of payments to move heavily in her favour, and this, combined with the erection of a high tariff wall—tantamount to a refusal to accept goods in payment of debts—resulted in a persistent flow of gold from the debtor countries into the vaults of the Federal Reserve Banks.

According to the theory which we have examined, the normal effect of such imports of gold would be to lower the value of United States money (which is based on gold) and to send up the prices of goods. Imports of goods would therefore be encouraged, while exports would be discouraged, and gold would ultimately tend to flow outwards. But the authorities considered that such a rise in prices would have had harmful effects, particularly as bank credit was expanding at a rapid pace, and they therefore took steps to counteract the possible effects of the gold imports by storing the metal away and preventing it from causing an additional expansion of credit and a rise in prices. In other words, they *sterilised* the additions to their gold reserves, and thus artificially prevented them from effecting that adjustment of the balance of trade which would otherwise inevitably have taken place. Only by resorting to special measures of this kind could the United States resist the operation of the economic forces which we have discussed, and continue for a considerable period of time to receive far more payments than she was called upon to make.

Although for a time America was able in this way to delay the operation of economic forces, the one-way movement of gold could not fail to have disastrous effects on the world financial mechanism, while the countries which had to pay for American exports with gold or by raising loans and establishing credits in New York had ultimately to find some other means of payment. On her part, America could not continue indefinitely to absorb the greater part of the world's gold and extend unlimited credit to other nations. As we shall see later, the drain of gold from countries which were debtors of America led eventually to a suspension of the gold standard in many of those

countries and contributed to the general collapse of world trade. But the problem of America's balance of indebtedness remains to be solved.

Clearly, a drastic reorganisation of her balance of payments is required. To effect this she can resort to one or some of four alternatives:—

- (a) Decrease her visible exports of goods;
- (b) Decrease her invisible exports on account of interest and services rendered;
- (c) Increase her visible imports of goods by buying more from other countries;
- (d) Increase her invisible imports by lending more abroad.

The first two methods she can scarcely be expected to adopt. Like every other country, America seeks to establish as large a volume of exports as possible. Her exporters would justifiably oppose anything in the nature of a restriction on their trade, whilst American ship-owners, bankers and others would equally object to a curtailment of their income. In any case, it would be absurd to suggest that the position should be improved by placing further *restrictions* on trade.

Hence we come to the third method, the adoption of which is rendered wellnigh impossible by reason of the high tariff barrier maintained in the States and by the attitude of the American business man, who still believes that his country must have a favourable balance *of trade*.

Before the Great War the United States was a debtor nation, *needing* a favourable visible trade balance out of which to meet her annual commitments for interest and capital repayments. Like most debtor nations, she adopted a policy of high tariffs to assist in obtaining that balance, while her industry and commerce were built up in such a way as to develop large exporting industries which were capable of creating the necessary export surplus.

During the Great War, the United States rapidly changed from being a debtor country to being the largest creditor nation in the world. Unfortunately for both that country and the world, however, the changed conditions came so quickly that she was unable to alter her industrial and commercial structure to meet them. In fact, Americans did not realise that any change was needed, mainly because the peculiar conditions which prevailed during and after the War obscured the real position and led them to sell goods abroad on a large scale whilst buying as little as possible from other countries. The need for a change of policy did not, therefore, make itself felt, so

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America found no reason for discontinuing her policy of excluding foreign goods, as far as was possible, and of selling as much as possible abroad.

One important reason why the United States was able to continue this policy was that her debtors were able for a time to send gold to meet a large part of the debts which were due from them. And in justice to America it must be acknowledged that in the early post-war years she fulfilled her function as a creditor country by lending considerable sums abroad. Thus, in 1927, the foreign capital issues in the United States totalled, in round figures, \$1,567,000,000, equivalent to about £325,000,000. In 1928 they reached the record total of \$2,096,000,000, or about £440,000,000. In 1929 the superior attractions of the local boom in stocks reduced them to \$1,466,000,000, or about £300,000,000; in 1930 they rose slightly to \$1,550,000,000, or about £320,000,000.

Unfortunately for the United States herself and for the world, many of these investments proved to be unsound; some debtors entirely defaulted, whilst others were unable to meet the service of their debts, with the result that Americans have become very loth to employ further capital overseas. In 1931, a year remarkable for a complete absence of world confidence, American investments abroad slumped to \$507,000,000, or just over £100,000,000.

There can be little doubt that the problem before the United States—how to exclude the goods of other nations and yet obtain payment of their debts—is one which concerns not only the United States but also the world as a whole, for the prosperity of the world depends on the prosperity of the greatest creditor nation and on the making of some arrangement which will enable debtors to meet their obligations without ruining themselves. Both experience and theory prove that America cannot continue to function as a great creditor nation and to lend vast sums overseas unless she makes it possible for the debtor nations to make their payments. The nations of the world cannot continue to increase their capital indebtedness to the United States when that country, by the maintenance of almost insuperable tariff barriers, persists in excluding their goods—the only form in which payments of interest on the loans and repayments of capital can ultimately be made. Even the United States cannot ignore the consideration to which *The Economist* * has referred, that “To lend money to all the world and then to restrict imports is to invite all debtors to repudiate their obligations by making it difficult and expensive for

* *Free Trade Supplement*, April, 1929.

them to pay their debts by the only means by which international debts can finally be paid, namely, by the trade of goods and services ”.

INTERNATIONAL ACCOUNTS OF FRANCE.

Since the Great War, France has ranged herself alongside Great Britain and the United States as a leading creditor nation, her position as such being due largely to the amounts allocated to her in respect of German reparation payments. Unfortunately, France, like the United States, has in recent years pursued a policy which could have only disequilibrium as its inevitable result. Not only has she maintained high tariffs and imported relatively little from other countries, but she has also steadfastly refused to re-invest abroad any appreciable portion of her admittedly large surplus of payments. It is true that, at the time when French currency was depreciating rapidly as a result of the post-war inflation, large sums were invested abroad at short term by her bankers in their desire to convert their holdings into stable currencies. But France has done little in the way of long-term lending abroad, while, following the stabilisation of her currency in 1928, the bulk of her short-term balances were repatriated, in most cases at a considerable profit in consequence of the devaluation of her currency.

As a result of this policy, the gold holdings of the Bank of France rose from £164 millions in July, 1928, to £671·1 millions in December, 1932, at which figure they represented nearly three-eighths of the world's supply of monetary gold, and were nearly £50 millions higher than those of the Federal Reserve Board, whose reserve amounted to £626·6 millions (though this figure took no account of the holdings of the United States Treasury—some £250 millions). The Bank of France, as a result, adopted a policy of “sterilisation” similar to that of the United States, whilst the other countries and the world as a whole passed through one crisis after another because of the fall in prices which followed the maldistribution of the supplies of monetary gold.

There is thus no doubt that, in the recent scramble for gold, with its disastrous effects upon world trade and finance, France has been the chief culprit. Like the United States, she has sterilised a large part of her gold reserves and has refused to allow her debtors to pay her in the form of goods, while she has restricted overseas investment to a far more serious extent. Indeed, France has long since reached the point where her debtors can no longer pay her; and there is reason

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to believe that, despite her enormous gold reserves and her convinced determination to maintain the gold standard at all costs, the day is not far distant when she will suffer difficulties as severe as those through which Britain and other countries have had to pass.

EXCHANGE RESTRICTIONS AND CONTROL.

(In recent years, Governments and central banks which have sought to effect equilibrium in their national balance of payments have been faced with almost insuperable difficulties arising from the dislocation and falling off in international trade, the frequent fluctuations of the foreign exchanges, and the disturbance of the exchange mechanism by the vast transfers on account of war debts and reparation payments. As a result, a variety of *extraordinary* methods have been adopted in order to achieve the main object of ensuring a balance of international payments, and to achieve some or all of the ancillary objects of: (a) maintaining the gold standard without the necessity of making gold exports when the exchanges diverge from the mint parities; (b) preventing exchange speculation and ensuring a fair equilibrium between the legitimate demand for and supply of exchange; (c) obviating exchange fluctuations and the consequent disturbance of trade; (d) preventing the outflow of capital and/or a "flight" from the currency concerned.

Maintenance of a Balance of Payments.—We have observed that, under a *free* gold standard, a nation's international account is almost automatically balanced because, when the national balance of payments becomes either too adverse or too favourable, the operation of economic forces tends to change the direction of trade, though steps may have to be taken by the Government or the central bank to expedite or strengthen the natural forces of adjustment. In recent years this interference by the Government or central bank has become both more direct and more radical, and in practically every country drastic action of one form or another has been taken by the Government or the central bank to secure equilibrium of the balance of payments.

As the state of a nation's balance of payments is practically indicated and largely determined by the position of her foreign exchanges, action to improve the balance of payments usually implies direct or indirect interference with the exchange mechanism. Naturally, the measures adopted in various countries differ from one another in both intention and application, but six principal forms of interference may be distinguished: (a) *Exchange Pegging*; (b) *Exchange Depreciation*; (c)

Exchange Restriction ; (d) Restriction of Transactions which Give Rise to Exchange Operations ; (e) Blocked Accounts ; (f) Exchange Clearings.

Exchange Pegging.—This involves official interference with the exchange mechanism of a country, usually with the objects of minimising fluctuations in the rates of exchange and of stabilising the rates at a predetermined level. The level so chosen may be the ordinary mint parity, when the country concerned seeks to maintain the gold standard; or an arbitrary gold parity, when the country concerned has a currency of silver or paper which it seeks to maintain at a given level in terms of gold or of other gold currencies.

Although details may differ, the essential of the system of exchange pegging is that the Government or other responsible authority is established as a large dealer in exchange, prepared to buy or to sell foreign currencies whenever the principal exchange rates show a tendency to move from the rates which it is required to maintain. If the exchanges of their own accord keep near the required level, then the authority concerned takes no action; but, if the rate tends to move away from the desired level, the authority enters the Market as a buyer or seller, as the case may be.

This procedure was adopted by the British Government during the Great War to peg the London-New York rate at the arbitrary level of \$4.76 $\frac{7}{8}$ per £1, and also more recently, since our departure from the gold standard in September, 1931, to control the sterling rates with other nations (see Chapter XX). Ultimately, too, this system lies behind the gold exchange standard system worked with such success by India for many years before the War, and in recent years so widely adopted by other nations.

To achieve the necessary control and to maintain the exchange at a particular level, the Government or the central bank must have adequate resources; hence it secures funds or credits in foreign centres, especially in the centre of the currency to which the home currency is to be "pegged", and it utilises these funds to operate on the Foreign Exchange Market. If there is a fall in the exchange value of the "pegged" currency, the controlling authority intervenes to raise that value by taking supplies off the Exchange Market, or (what comes to the same thing) by selling foreign currency. If, on the other hand, there is a rise in the exchange value of the currency, the "control" intervenes by offering the currency for sale, or by making purchases of the more important foreign currencies so as to influence the exchanges in the other direction.

During the War the British Government pegged the New York

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rate by arranging credits with its agents, Messrs. J. P. Morgan & Co., who were empowered to buy sterling in New York at the fixed price. A large part of the funds in the United States were obtained by the purchase by the Government of all British-held American securities, which were then sold by our agents in New York; and, when these resources were exhausted, loans were obtained direct from the United States.

Similar credits were raised in the United States and France by the Bank of England and by the Treasury during the crisis of 1931 in an attempt to keep sterling on the gold standard. For some months after our suspension of the gold standard, the sterling exchanges were left to find their own level, but early in 1932 the Government definitely adopted the policy of exchange control, and, with a view to preventing marked fluctuations in the rates of exchange, placed at the disposal of the Bank of England, in what is known as the "Exchange Equalisation Account", a sum of £175 millions* which the Bank was empowered to use for the purpose of preventing undue fluctuations in the principal exchanges.) Likewise, the United States Government in 1934 placed at the disposal of the Secretary of the Treasury an even larger fund of \$2,000 millions which the United States Treasury was authorised "to use for such purchases or sales of gold, foreign exchange and Government securities as the regulation of the currency, the maintenance of the credit of the Government and the general welfare of the United States may require". Similar efforts at pegging exchange rates have been and are being made by many other countries.

As the ways in which these funds are used depend entirely on the arbitrary decisions of Governments and/or central banks, and as those decisions are, in turn, determined by an infinite variety of factors, largely political, it is quite obvious that it is impossible to explain the resultant position of the controlled exchanges by reference to any foreign exchange theory.

Ultimately, of course, the aim of these control operations is much the same as that of alterations in the central bank rate, or of open-market operations such as those undertaken by the Bank of England and other central banks. But direct intervention by the purchase and sale of currency in the Market is far more *immediate* in its effects, and it has the great advantage that speculation is discouraged because of the knowledge that the controlling authority stands at any time ready to intervene when the exchange tends to move from the pegged rates. On the other hand, the system has the great disadvantage of involving

* Increased in 1933 to £375 millions.

the monetary authority in vast financial transactions which are really unrelated to its real functions and which *may* saddle it with enormous liabilities and even loss. Soon after the War, for instance, millions were lost by the Indian Government in an endeavour to keep the rupee at its fixed ratio of 1s. 4d., while in September, 1931, before we were forced off the gold standard, far greater sums were lost by the British Government in its unsuccessful attempt to maintain the exchange value of sterling near the mint parity with the franc and the dollar.

(Control of this description is extremely beneficial if it acts as a deterrent to unhealthy speculation; if it succeeds in smoothing out fluctuations; if (as in the case of the British fund) it is used to obviate disturbance of the exchange rates by the actions of speculators or by large transfers or withdrawals of "refugee" capital; and if it prevents the exchange value of a currency from reaching an entirely artificial and possibly harmful level. The danger is that the effect of control may be to "peg" the exchange at an artificial level which may not be justified by the financial condition of the country and may be quite out of keeping with the maintenance of a healthy trade position.)

Exchange Depreciation.—(Closely akin to the foregoing in its effects on a nation's international balance sheet is the method of exchange depreciation resorted to in recent years by countries whose international credit is high and whose currency has not been wildly inflated, in particular by Japan, Great Britain and Czecho-Slovakia (see Chapters XIX and XXV).

(The effect of this deliberate lowering of the value of a currency is (for a time, at any rate) to make foreign currencies more profitable to sell and dearer to buy, and so to place a bounty on exports from the country concerned and to discourage imports into that country. The country becomes a better market in which to buy goods but a poorer market for the products of other nations.

As is to be expected, however, the usual result of currency depreciation is to stimulate defensive measures on the part of the countries which suffer from it. Ultimately, it leads to a competitive race in the depreciation of world currencies, and, as Professor Gregory has recently shown,* it becomes a powerful deflationary factor in the world as a whole, because it cannot fail to cause a fall in the price of those commodities which have their greatest market in the countries whose currencies are depreciated as well as a fall in the world prices of

* *Memorandum on Monetary Policy*, International Chamber of Commerce, March, 1934.

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exports from those countries. Hence, the final effects of depreciation may be more serious than the evils which it was hoped to cure, whilst, as will be explained later, efforts to improve the balance of trade by such means usually in the long run defeat themselves.

Closely allied to exchange depreciation both in its methods and in its effects is the process of *devaluation*, whereby the gold equivalent of a standard coin is reduced below its previous value, as was done, for example, by France in 1928 and by the United States in 1933 (see Chapters XIX, XX and XXV).

Exchange Restrictions.—In the pure form of exchange pegging which we have described, no restrictions are placed on ordinary exchange operations: all dealings are left perfectly free, but the responsible authority from time to time enters the Market as a buyer or seller. Experience has shown that, in many cases, this form of interference does not go far enough, and it is found impossible to control the exchanges unless transactions in foreign currencies are subject to some form of restriction. This has been the case mainly in countries which have a heavy burden of international indebtedness and which have suffered markedly from currency instability, including most Continental countries, all South American countries, Japan, Australia and New Zealand.

(The restrictions themselves are of almost endless variety. In some countries all exchange operations are undertaken by the Government or the central bank, and no other dealings are permitted; in others the commercial banks are allowed to operate in exchange transactions provided they conform to an "official rate" and make the necessary returns.) In some cases exchange transactions must be licensed by the responsible authority; in others any foreign currency obtained for exports must be surrendered to the central bank; whilst in other countries again the Government has gone so far as to decree that a proportion, say 10 %, of the payments due to exporters shall be taken by the national bank operating the "control" and held for the purposes of the State (e.g., for meeting debt service abroad). In New Zealand and Australia, for instance, the Governments of those countries undertook the control of exchange with a view to ensuring that sufficient credits would be available in London for meeting State payments in that centre, and, to this end, the Dominion banks were compelled to pay a certain proportion of their exchange resources into the London account of their respective Governments.

(As a rule, exchange restrictions of this kind are accompanied by an embargo on speculative operations, and penalties are imposed on

transactions which are held to be for other than legitimate trade purposes.*)

Restriction of Transactions Giving Rise to Exchange Operations.—

Less direct, but equally effective in their ultimate effects on the exchanges, are the steps which have been taken in several countries to modify the national balance of payments by (action intended to encourage exports and check imports. The imposition of tariffs, anti-dumping duties and the granting of export bounties) are, of course, old-established means of improving a country's international financial position, but in recent years there has been a wide extension of such measures, together with direct action to restrict altogether or subject (to licence the import of certain (and especially luxury) articles with the immediate object of lessening overseas payments. In many countries "import quotas" are in operation in reference to a wide variety of articles, while action having much the same object is the restriction of foreign lending, typified by the embargo on several occasions placed by the British Government on foreign loans from the London Money Market.

Most of such special restrictions have been imposed as a means of self-defence against forces which have threatened the countries concerned with financial embarrassment, if not disaster; and though their immediate effect on the balance of payments may have been beneficial, it is impossible to say whether they will ultimately prove advantageous. Certainly they are open to the usual economic objections to protective devices, while, from the standpoint of the exchanges, their effect is to strangle trade and so to diminish the volume of those commercial transactions upon which both the creation and the demand for exchange depend.

Blocked Accounts.—In certain foreign countries, notably Germany, Austria and Hungary, the system of exchange restriction has been carried to the extent of "blocking", within the country concerned, funds which are due to foreign nationals on account of old debts, or for current imports or services rendered. As a rule, the funds so blocked cannot be sold except under licence from the Government or responsible monetary authority, and, in general, such funds cannot be used by the foreign nationals to which they belong unless they are applied for specific purposes *within the restricting country*, such as for the purchase of goods other than for export, or for investment in

* In 1931, Austria passed a law to the effect that anyone who recommended an Austrian subject to buy foreign stock not quoted on the Vienna Stock Exchange should be liable to a fine of 50,000 schillings or one year's imprisonment.

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property, or in mortgages. In general, the object of blocked currencies is to supplement exchange restrictions by preventing foreigners from withdrawing funds due to them and so reducing the amount of funds which are available for transfer to other countries.)

An important effect of the system is to protect a debtor in the country concerned against possible future depreciation of his currency, because if (in the absence of a system of *blocked* accounts) such a debtor is merely *restricted* from making his foreign payments, any depreciation of the currency by the time he is permitted to pay may cause him serious loss. On the other hand, the foreign *creditor* is almost bound to suffer, and actually such creditors have in many cases been glad to sell their rights to blocked currencies at a considerable discount. In fact, despite the objections of the authorities concerned, blocked currencies are dealt in (more or less illegitimately) at a discount, i.e., at lower rates of exchange than the rates *officially* fixed for "free" currency.)

In most countries where the blocked account system has been instituted, the central bank has taken on the functions of a Clearing House for foreign exchange, and, having complete control over all purchases and sales of foreign currencies against the home currency, it can maintain its official rate at whatever level it pleases, though it must, of course, pay some regard to the interests of traders. In these circumstances it may be possible, through the intervention of the central bank, for an exporter to the restricting country to obtain the release of blocked currency due to him, provided he can arrange for an importer in his own country, or in any third country, to use the currency to pay for goods in the restricting country. It will be clear, therefore, that the system of blocked currencies can be so operated as to ensure a balance between payments and receipts in respect of the movement of goods or services, whilst preventing the withdrawal of funds from the country by foreign nationals.

The system of blocking currencies has not been applied to transfers of capital *by the nationals of the restricting country*, mainly because those nationals are so impecunious that they have no funds, over and above their current requirements, which they can spare to transfer abroad. But this system would obviously be inapplicable as a means of currency stabilisation in large *creditor* countries (e.g., Britain and the United States), for the simple reason that the nationals of such countries have such large sums which they *can* transfer, if they are disposed to do so, that it would be impossible to control the exchanges if withdrawals by *foreigners* only were prevented.

From the broad standpoint, the system is objectionable because it practically puts an end to international settlements: payment in blocked currency (except to the extent that it can be sold at a discount) is to all intents and purposes no payment at all; and whilst the currency due to one country remains blocked in another country, the state of indebtedness between the countries is, of course, unchanged. In this respect the position is worsened in some cases because the central bank is actually permitted to utilise blocked currency balances as part of its resources, even to the extent of lending the funds to its own Government, an arrangement which, of course, amounts to a forced loan by the creditor country to the restricting country.

It is not surprising that the existence of restrictions such as we have described has had the effect of causing a rapid decline in the foreign trade of the restricting countries, and that, wherever they exist, traders are strongly agitating to have them modified or removed altogether, whilst foreign exporters are tending to regard orders from restricting countries as being of little value and scarcely worth bothering about.

Exchange Clearing.—For these reasons, several countries have been led to try to obviate the strangling effect of exchange restrictions by entering into agreements for the establishment between them and other countries of the system known as “Exchange Clearing”, whereby all payments and receipts between the two countries are required to pass through the hands of an established authority, whose business it is to effect an equilibrium by offsetting the payments against the receipts, and so do away with exchange dealings by individual traders.

The first of such agreements were those concluded in November, 1931, between Switzerland and Hungary, and between Switzerland and Austria. Since then, Switzerland has concluded agreements with half-a-dozen other countries, while most countries in Central and South-east Europe and several South American countries have made similar arrangements with countries to which they export or from which they import on a fairly substantial scale.

As between Switzerland and Austria, for instance, arrangements were made whereby all payments and receipts on account of imports and exports between the two countries were to pass through accounts at the Swiss National Bank and the Austrian National Bank respectively, and the intention is to restrict imports by each country from each of the participating countries to the amount of funds available to pay for them and so to ensure an automatic balance of payments.

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(The advantage of the system is that exporters in Country A ensure a market for their goods in Country B, as well as ensuring payment for those goods out of funds due by importers of Country B's goods in their own Country A. Moreover, it brings home to a country in unmistakable fashion the fact that it cannot continue to sell abroad unless it is also prepared to buy, and that, broadly speaking, all purchases of goods from other countries must be paid for by exports. Hence, as between countries operating the clearing, the system tends to reduce such obstacles to foreign trade as exchange restrictions, import embargoes, tariffs and quotas, while it automatically discourages the dumping of goods abroad or the application of the device of exchange depreciation in order to obtain an advantage in foreign trade.

Whereas the effect of exchange restrictions is to impede trade, the ultimate effect of exchange clearing is to increase both the imports and exports of the participant countries, i.e. to encourage their foreign trade by balancing their imports and exports in an upward direction.)

There are also other advantages. For instance, Austria saved herself immeasurable suffering on account of shortage of food by instituting clearing arrangements with Hungary and Yugo-Slavia. Moreover, the comparative monetary stability which has been enjoyed by the countries of Central and South-east Europe since the post-war period of reconstruction has been largely due to the exchange clearing arrangements which have existed between them.

It must be understood that the system of exchange clearing is in no sense an alternative to the gold standard; neither is it incompatible with the gold standard. On the contrary, the system operates more smoothly under conditions of stable currency than otherwise, for, as between two countries on the gold standard, the mint parity serves as the basis for the settlement of all claims, whereas if the exchange is a fluctuating one, complications are inevitable, and someone (either traders or the authorities) must bear the loss of any adverse movements in the rates. With this in view, some clearing arrangements provide for the establishment of a fund (out of the commissions paid by exporters) to cover losses which may arise from exchange fluctuations.

(The main disadvantage is, of course, that the system represents an interference with the free play of economic forces and with the liberty of action of the subject. Further, it tends to encourage imports of goods which might otherwise not have been purchased, or of goods which could have been purchased on better terms elsewhere. It is said that, as a result of the Swiss-Hungarian exchange agreement, for

instance, every Hungarian wears two Swiss wrist-watches, and that he would probably wear more if he had more than two wrists!

More serious is the disadvantage that the system is likely to break down unless there is a true balance of trade between the two countries concerned, and that it is usually the country which is in debit on the clearing account which is not in a position to make the necessary balancing payment *in cash*, with the result that the agreement is likely to fall through unless the creditor country will accept further payments *in kind*. This, of course, may mean that the creditor country is placed in the position of buying what it does not want, and that to induce it to do this the debtor may have to accept uneconomic prices for its goods. This actually happened as between Hungary and Switzerland; when in 1933 Hungary accumulated a heavy adverse balance on the clearing account, Switzerland undertook to accept in payment a large quantity of Hungarian wheat at a price which compared unfavourably with the world market price.

To some extent the difficulties will be removed by the institution of three-cornered or multi-cornered clearing arrangements such as that which was made in March, 1934, between Germany, Greece and Czecho-Slovakia, whereby Greece, which was largely in debt to Czecho-Slovakia on their mutual clearing account and in credit for much the same amount on her clearing account with Germany, cancelled both accounts by agreeing to credit Czecho-Slovakia with the sum due from Germany. This arrangement naturally obviated the necessity for heavy artificial transfers of goods, and, if it is developed, the system of exchange clearing should work far more satisfactorily and tend to encourage the expansion of international trade.)

There are other important objections. One of these is that the principles of the system are so far from being settled that modifications, based on experience of the working of the arrangements, have to be continually introduced. Hence, when an agreement expires there is no certainty, until the new agreement is actually published, how the new arrangements are to operate or how they will affect exporters and importers.

(From the standpoint of creditor countries which are not parties to the agreements, the arrangements are definitely objectionable because they imply that the countries which enter into these agreements give preferential treatment to their *mutual* debts as against debts which may be due by them *to other creditors*. Hence, such agreements tend to stimulate bilateral trade at the expense of three-cornered or

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multi-cornered trade. In other words, they tend to ignore the fact that international trade is largely triangular or multi-angular in character and that it cannot be split up into watertight compartments embracing only two countries at a time. Under the agreement between Switzerland and Hungary, for instance, the position was that Hungary gave preferential treatment to her Swiss creditors despite her heavy indebtedness to Britain; likewise, Germany's clearing arrangements with Holland and Switzerland have led to the preference of her Dutch and Swiss creditors as against her other creditors. In other cases (e.g., Yugo-Slavia), the purchase money for imports from countries which have exchange clearing agreements is paid into the exchange clearing account, whereas money due to countries with which there is no such agreement is paid into blocked accounts, and it is not difficult to imagine that the latter type of creditor fares the worse.

Such discrimination has naturally led to protests from the creditor countries concerned, and especially from Great Britain. Banking circles and authorities in this country are, in fact, strongly opposed to exchange clearing arrangements, but in June, 1934, the Government came to the conclusion that the system is a necessary evil to which we, too, must resort if we are to obtain payment of what is due to us from debtors such as Germany, who are operating clearing arrangements to the advantage of their other creditors.

Following Germany's threat to default on the Dawes and Young loans, powers were taken under the *Debts Clearing Office and Imports Restriction Act*, 1934, to set up an Exchange Clearing Office in any cases where the Treasury is satisfied that payments due to this country are being subjected to restrictions, or are prohibited, or have been discontinued. By the same Act the Board of Trade was given power to prohibit or restrict importation from any country imposing quantitative restrictions against British trade, if such restrictions are, in the opinion of the Board, discriminatory or specially detrimental to the trade of Britain or of any of its colonies or mandated territories. The operation of the Act is limited to two years.

In spite of the many objections and widespread criticisms (especially, of course, from countries which are not parties to the agreements and whose exports consequently suffer), these agreements have undoubtedly been extremely beneficial to the *participating countries*, and none of the countries immediately concerned has found reason to discontinue them. They have certainly proved more generally advantageous than other forms of exchange restrictions to which we have referred, and have been applied as successfully by countries (such as Greece and Yugo-

Slavia) with inconvertible currencies as by countries (such as France and Switzerland) which maintain the gold standard.

Evils of Restriction.—On the whole, there can be no question that the multitude of exchange restrictions existent at the time of writing are steadily digging the grave of international trade. As soon as one country imposes restrictions, other countries become apprehensive of their own positions and proceed to do likewise, until even the relatively strong countries feel themselves bound for their own protection to follow the general practice.

Moreover, the existence of restrictions almost invariably leads to evasion and to underhand methods of exchange dealing which introduce an unnecessary and unsavoury element into perfectly legitimate business. Even first-class traders have unwillingly to resort to such operations; otherwise they would suffer from the competition of other traders who have no compunction in the matter, and so we find that, in most countries where restrictions exist, there is, outside the official exchange market or Bourse, an unofficial market (or so-called "*Black Bourse*") in which dealings take place at rates which are markedly different from the official quotations. In the case of New Zealand and Australia, for instance, the unofficial markets in exchange became particularly important during 1933-34, when the rates of exchange between these Dominions and London were fixed by the Governments of those countries at an unduly low level with a view to encouraging exports and discouraging imports.

As the name indicates, the object of the Black Bourse is to provide a medium for outwitting the authorities, but experience has shown that it is not always the authorities that are outwitted: the secretive nature of the business has occasionally led to fraud (as, for example, the issue of faked drafts), of which honest traders have unwittingly become the victims. On the other hand, the business transacted on the Black Bourse has, in certain cases, proved so extensive that it has had to be given official recognition.

Actually, the attainment of the very purpose which exchange restrictions are designed to foster is in itself a powerful influence against their continued effectiveness. For so far as these restrictions have the effect of influencing the balance of payments in favour of the country concerned, they also *strengthen* its currency and encourage a *rise* in its value, so placing a handicap on exports and encouraging imports, with the result that the balance of payments tends again to become unfavourable. Hence the restrictions become even more difficult to uphold, and increasingly severe restrictions are called for if

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the original object is to be achieved. In a word, any attempt to secure a permanently favourable balance of payments by artificial interference with the exchanges is doomed to failure since it involves an attempt to maintain a state of disequilibrium in the face of the strong economic forces working in the opposite direction. Moreover, these restrictions might have been borne at a time when trade was more prosperous and so in a better position to function in spite of obstacles, but they must be doubly discouraging when productive operations are already being so seriously hampered by uneconomic prices and a world-wide lack of confidence.

We can, therefore, only hope that in time the world will realise that restrictions and control completely stultify the natural tendencies and correctives which in the past have been proved to work best in the long run, and that the time will come when the exchanges are again largely an automatic mechanism freed from the arbitrary and uncertain interference of Governments.

CHAPTER XV

THE LONDON MONEY MARKET

AN attempt was made in the preceding chapter to explain the vital importance in the modern world of the rates of discount fixed by the central banks in the various countries with the object of regulating internal credit and facilitating the balancing of international accounts. In the present chapter it is proposed to consider briefly the organisation and structure of the London Money Market, with a view to explaining how the control of the central bank in our own country is attained and made effective.

The London Money Market.—There is probably no more important nor more highly organised centre of human activity than the intangible entity known as the "London Money Market", yet it is practically impossible to give any precise definition either of the present scope of its activities or of the sphere of its operations. Whatever the "market" may have been in the past, it has now no meeting place, while its modern activities are limitless in both distance and time. It can best be defined as the sphere of operations of the bankers, brokers, discount houses and financiers in the City of London, who deal in money and credit. It connotes the dealers and dealings in the closely knit organisation, centred round the Bank of England, whereby those who desire to borrow are brought into contact with those who are able to lend. Although it is essentially a London organisation, its operations extend to practically every corner of the civilised world, and its influence is felt wherever men trade.

By universal consent, the London Money Market stands pre-eminent above all others, not only by virtue of its wealth, efficiency and sound organisation, but also because of the unrivalled experience and recognised capacity of its members. No one would deny the immense value of its services in promoting trade, encouraging enterprise, and financing the wide gap between production and consumption throughout the world. Its importance to our own country can scarcely be exaggerated. It has enabled Britain to attain and maintain her position as the world's

foremost financial centre, while it represents an investment which regularly brings her an income of many millions sterling per annum.

While it is correct to say that the Market deals in "money" and "capital", it should be borne in mind that both these terms have widely different applications. The "money" which forms the *alpha* and *omega* of the London Market is not actual cash—which is rarely seen on the Money Market proper—but credit money in its infinite variety of forms: bills, cheques, notes, promises to pay, bank balances and securities.

In the same way, the term "capital" is invariably applied in the Money Market proper to mean short-term or liquid capital which is immediately available to extinguish debt, whereas in the specialised section of the Money Market known as the *Capital Market* (which is centralised round the Stock Exchange) the term may include, in addition to short-term capital, monetary capital which is made available by long-term loans for productive use over lengthy periods.

But the primary and all-important function of the London Money Market is to deal in loans for short periods. Its special business is to organise and regulate the demand for and supply of short-term capital, and to fix the rate of interest at which short-term borrowers shall be accommodated by lenders.

These short-term loans are made in two distinct ways: (a) *By the discount* of bills of exchange and Treasury Bills, in which case the interest earned on the sum advanced by the lender in respect of each bill is represented by the discount deducted from the face value of the instrument, while the sum advanced consists of the *true present worth* of the bill, i.e., the face value of the bill less the discount—a procedure which belongs essentially to the *Discount Market*; (b) *by the loan* of sums of money against parcels of maturing bills or other short-dated securities—a procedure which belongs essentially to the *Short Loan Market*, although, as we shall see, loans of this description are made also on the Discount Market.

Lenders on the London Money Market.—By far the largest lenders on the Market are the mammoth banking institutions known as the "Big Five"—the Midland, Lloyds, Barclays, the Westminster, and the National Provincial. Doing a similar but much smaller loaning business are the other clearing banks, such as Martins and Glyn Mills, together with the dominion, colonial and foreign banks having offices or agencies in London.

The funds lent by the banks are obtained mainly from the

deposits of their customers. Much of the money they receive is invested in Government and other securities; much more is used in granting loans and advances to customers. A proportion of their funds is retained in cash to meet everyday demands, and a large amount is left on current account at the Bank of England—the bankers' bank. Beyond all this, the banks have a floating surplus of money, described in their balance sheets as "*Money at Call or Short Notice*" which they lend out in the Money Market at low interest for short periods—overnight, from day to day, or for seven days. Most of this money—constituting the greater part of the *Short Loan Fund of the London Money Market* and totalling probably upwards of £150 millions at the present time—is repayable at call (i.e., on demand) or at specified short notice, and is, therefore, quickly available to meet extraordinary emergencies.

Apart from the purely banking business of accepting deposits and lending money on current and loan account, the banks also undertake many of the functions performed by more specialised organisations. They transact the bulk of present-day foreign exchange operations. They undertake acceptance business, grant loans against goods entering into international trade, provide short-term credit for the bill brokers and discount houses, and assist the underwriters and issuing houses in raising capital from the investing public.

Considerable sums are also lent on the Market by London discount houses, investment firms, insurance companies and underwriters, while still further sums are remuneratively employed in the City, through the intermediary of London agents and correspondents, by banks, financial houses and commercial organisations in all the other countries of the world. The London merchant banks and the London offices of foreign banks in particular, ordinarily have large sums left on deposit with them by foreign banks and customers, and the holding banks naturally make use of a large part of such funds by employing them on the London Money Market.

Borrowers on the London Money Market.—In ordinary circumstances, the chief Market borrowers of short-term funds are the bill-broking agencies who together comprise the *Discount Market*. These include the three world-renowned discount houses, Alexander's Discount Co., Ltd., the Union Discount Co. of London, Ltd., and the National Discount Co., Ltd., together with a number of bill brokers proper, constituted as private companies or private partnerships. Although the three discount companies employ considerable capital of their own in their businesses, and also accept funds at interest from

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the public, a large part of their operations and the major part of the operations of the ordinary brokers are conducted on funds borrowed for varying periods on the cheapest possible terms from the banks and other financial institutions. These funds are employed in buying (i.e., discounting) bills of exchange and other short-term securities, mainly British Government Treasury Bills.

Another important class on the *Short Loan Market* comprises the stock brokers and stock exchange dealers who borrow for the purpose of dealing in securities, and especially for financing the "carry over" of transactions from one settlement to another.

Since the Great War, the British Government has established itself as the largest borrower in the Market, the aggregate of its temporary borrowings in the form of Treasury bills (see below) being now far in excess of the whole of the Market's short-term loans to other borrowers.

Finally, there are the dominion, colonial and foreign Governments, the world-famous accepting houses, such as Brown Shipley & Co., Kleinwort Sons & Co., and Frederick Huth & Co., and the merchant bankers, such as Rothschilds, Hambros, Lazards and Schroeders—all of which lend, or borrow, large sums on the Market, and exert a strong influence on the prevailing rates of interest charged for the use of capital.

It must, of course, be understood that there is no clear line of division between the lenders and borrowers on the Market, or between the different sections of the Market. If certain members of the Market take a view as to the future of money rates, and act upon their opinion, the normal functions of borrower and lender may be reversed. Again, the functions of the Discount Market overlap with those of the Short Loan Market. Discount houses and bill brokers belong to both sections, but stock exchange dealers who borrow funds for carrying over stocks are essentially part of the Short Loan Market and have no connection with the Discount Market proper.

The Bill Broker.—Bill brokers arose in the first instance to undertake a class of business which the banks, with their manifold other lines of business, regarded as being outside their province or as being too troublesome for them to undertake. The banks were willing enough to invest their funds in suitable bills, but they were not willing to seek out persons wishing to sell bills, nor were they at all times willing to buy such bills as happened to be on offer. Hence dealers or brokers with a specialised knowledge, enabling them to undertake business which the banks would not risk, and willing to quote very

fine rates made possible by the magnitude of their turnover, fulfilled a very real need.

To-day, the term "bill broker" is frequently something of a misnomer, for the modern bill broker is usually much more than a mere intermediary. He usually discounts bills on his own account, and holds funds for his clients on deposit account, while the great "Discount Houses," though really bill brokers on a large scale, perform functions and undertake business which the early bill broker would have regarded as being beyond his reach.

Thanks to the system of bill-broking, important channels of liquid investment are open to the banker who has funds for investment: he can lend "call" money against the security of *floaters* deposited by the brokers who daily require large sums in order to carry their discounts; or he can purchase from the brokers parcels of bills selected so as to return his funds on given dates, when he will require them, and so as to afford him a variety of names representing a wide distribution of security. For the bulk of his investments in bills, therefore, the banker is saved the trouble of dealing with the real borrowers. Further, even if all the discounting were in the hands of bankers, it is doubtful whether they would be able themselves to reap the small turn made by the broker.

Another great advantage of the present arrangements is that the broker acts as a kind of clearing house between the firms and banks which have surplus bills for disposal, and the banks which have surplus funds for temporary investment in bills. From the fact that all such transactions are effected through the medium of a bill broker, whose business it is to know the names on the paper passing through his hands, and—most important of all—to see that they bear a first-class name or names, it will be understood that the bills thereby attain a standing that they would otherwise lack. Further, it is easy for the banks, when dealing with a broker, to decline bills bearing names for which they do not care, or bearing names of firms of whose paper they consider they already hold sufficient.

As the total of Treasury bills on the Market is probably four or five times that of trade acceptances, the need for a knowledge of credit is not nearly so important as formerly, while the brokers and discount houses (part of whose normal function is to *assist* the banks to get suitable bills) actually compete with the banks in tendering for the weekly allotments of Treasury Bills. One result of this is that at times the Treasury Bill rate has been forced to such a low point that the banks have had to fix a *minimum* charge (regardless of the Market

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discount rate) at which they will grant accommodation to the brokers.

Nevertheless, it cannot be denied that, but for the bill brokers, the banker would not so easily be able to employ his daily surplus funds from day to day. The average bill broker of experience has an unequalled knowledge of the standing and worth of the names which usually appear on London paper, and, by his specialisation in this business, he relieves the banks of much burdensome detail and justifies his claim to be an indispensable element of the London money machine.

It may be added that the Bank of England insists that the bills against which it lends money to any bill broker must be based on transactions the history and character of which are beyond reproach. As the Bank is the source to which the bill brokers must go when other supplies of money are withdrawn, the brokers are the interpreters of the wishes of the Bank. An account at the Bank of England is a necessity to a bill broker, and the Bank exercises great care in opening accounts, accepting as customers only men who fulfil certain requirements.

Speaking generally, both brokers and discount houses make their profits from the differences between the rates at which they buy bills and the rates at which they borrow their working funds. In neither case is their decision unfettered. The rate at which the broker borrows from the banks or other depositors can rarely fall below the rate at which the banks themselves borrow from *their* depositors,* whilst the rate at which the broker purchases first-class bills from the overseas banks cannot be higher than the Bank rate, i.e., the rate at which the Bank of England itself is prepared to discount bills for the Market. And since the rates of discount on the Market vary frequently, the success of the broker's business necessarily depends on the care with which he watches and anticipates changes in the rates, and the manner in which he manipulates his funds so as to secure the highest return. A *fall* in discount rates obviously means a *rise* in the present value of discountable bills, with the prospect of additional profit to the alert broker who can find a buyer at the enhanced price.

Accepting Houses.—The accepting houses constitute another integral part of the Discount Market. These institutions originally sprang from the ranks of merchants of high standing and repute whose names were known in other important trading centres of the world

* But "overnight" or day-to-day money may be lent at very low rates when market supplies of funds are plentiful; it may even be unlendable.

and who were consequently often called upon by importers of less standing to lend their names on bills, for which the importers put up the necessary funds at maturity and also paid a commission for the facilities thus afforded. So profitable did these wealthy merchants find these financial operations that in time they made the acceptance of bills a special and important part of their business, and so became known as merchant bankers. Later, some of them entirely abandoned their original trades in favour of the new class of business, and so became accepting houses pure and simple.

The function of the modern accepting house is to guarantee, with its signature, the fulfilment of contracts represented by bills of exchange. In return for a commission, which constitutes its profit, the accepting house undertakes to give its acceptance on bills drawn by the seller of goods upon the accepting house instead of upon the buyer.

The London accepting houses make it their business to know the financial standing of traders throughout the world, and they are able to function successfully by maintaining a careful watch on the general course of business and monetary conditions surrounding their operations. They are materially assisted in this regard by the experience and knowledge gained by those of their partners who function on the Boards of the joint stock banks, and on the Court of Directors of the Bank of England.

In recent years a considerable part of the world's acceptance business has passed to our joint stock banks, and in London, particularly, the joint stock banks now actively compete for this work which, in the past, was confined almost entirely to the specialist institutions and overseas banks.

As a rule, the London acceptance facilities for Empire trade are provided by the Dominion and Colonial banks, and for Eastern trade by the Eastern banks, the banks in each of these groups naturally specialising in business with the countries with which they are most intimately concerned.

The commission charged by the banks and accepting houses is usually calculated as a percentage on the face value of the bills and varies according to the usance and according to the strength of competition for business, though the basic rates are more or less fixed. So, while the joint stock banks charge their first-class bank customers only $\frac{1}{2}$ % per annum (i.e., $\frac{1}{2}$ % on a three months' acceptance), and other customers 1 % and upwards, the accepting houses charge varying rates according to the standing of the client. For first-class foreign banks they quote usually a rate of 1 % per annum, whilst to first-class

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foreign firms and smaller foreign banks they quote anything up to 2 % per annum.

To the activities of the accepting houses is due, in no small measure, the high prestige of London as an international financial centre; for the use of London banks and acceptance houses is by no means confined to trade with this country. The prestige of sterling has led, as we have seen, to its use in many transactions between foreign countries; and this demand can be met only by adequate acceptance facilities in London. Foreign countries regularly settle for goods sold and services rendered to one another through the intermediary of what is known as "*London Reimbursement*", i.e., acceptance and finance facilities arranged with a London bank or accepting house.

Security on the Money Market.—The security taken by lenders on the London Money Market depends on whether the advance is being made by discounting bills or by short-term loan.

In the case of *discounts*, the security is represented by the names of the parties to the bills concerned: if those names are of first-rate quality, as in the case of *bank bills*, then the security is of the highest and the rate of discount will be low; i.e., the price of the bill concerned will be high. If, on the other hand, the names on a bill are those of ordinary business firms and traders, the security (and so the rate of discount applied) will depend on the Market's appraisalment of the standing and reliability of the parties. In general, the market value of commercial bills (i.e., bills which do not bear the signature of a well-known bank or accepting house) will not be as high as that of bank bills, and the rate of discount will be higher than is applied to paper recognised as being of first quality.

Because of their great marketability, their high degree of security and their great advantage to trade, first-class bills of exchange, of not more than three months to run before maturity, have always been regarded as the most acceptable form of short-term security on the London Money Market. Such bills have always been in demand by the banks as an outlet for the investment of their surplus funds and, before the Great War, a large part of these funds was invested in first-class acceptances.

Following the outbreak of the Great War the position changed in several important respects. The falling off in trade and the failure of confidence throughout the world led to a great decrease in the quantity of such bills, while the British Government, compelled to finance its day-to-day commitments by borrowing practically the whole of the floating supplies of money on the London Market, got

the London banks and accepting houses to agree not to accept any bills other than those drawn for financing trade. This led to a marked decrease in the number of financial bills on the Market, but the deficiency was made good by the issue of *Treasury Bills*, which are of much the same effect as bills of exchange payable several months after date. The similarity was accentuated by the adoption of the system of offering these bills for sale by tender in such a way that the discount from the face value of the bill represents the interest on the money paid by the lender (see Chapter XVII).

As a result of the great post-war depression in trade, of the development of acceptance business by other centres, and of the spread of the practice of financing trade by bank loans and overdrafts, the volume of London acceptances has continued to decrease,* with the result that Treasury Bills have become firmly established as the principal form of short-term security on the London Market, while the *Treasury Bill rate* (i.e., the rate of discount at which Treasury Bills are dealt in on the Market) is now the main criterion of monetary conditions in London.

At the time of writing, the total of Treasury Bills outstanding is about £800,000,000, and, as a large part of this huge amount is held by the Money Market, it is clear that Treasury Bills (although originally a temporary expedient) are likely to be an important market factor for some years to come.

Floaters.—The other form of borrowing on the Market is by short-term loans, in which case the security usually consists of parcels of maturing bills of exchange and short-dated Government securities, such as Treasury Bills and Treasury Bonds. Short-term securities of other descriptions are also taken, and occasionally short-term advances are granted against bonds which do not mature for as long a period as three or four years.

In general, the securities given for short-term loans on the Market must have the characteristics of absolute safety and immediate realisability. When this is the case, the securities concerned change hands so frequently, and, as it were, "float" about the Market from

* Mr. E. L. Franklin, of Samuel Montagu & Co., stated in January, 1934 ("The Scramble for Foreign Bills", *Financial News Anniversary Number*), that just before the War the volume of London's acceptances was about £380,000,000, of which *one-sixth* or *one-seventh* were acceptances of the British deposit banks.

The Macmillan Report estimated that London's acceptances on foreign account totalled about £202,500,000 in mid-1929, and about £152,900,000 in March, 1931, whereas at the time of writing (April, 1934), the total is believed to be between £110,000,000 and £120,000,000, of which at least *one-quarter* are London clearing bank acceptances.

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one person to another that they are in market parlance referred to as "*floaters*". Although conditions have necessarily had to be modified with the great falling off in the number of bills of exchange available, the joint stock banks usually insist upon a high percentage of bills in the parcels which they accept as security for their short-term loans, and they are generally more stringent in this respect than are other market lenders. For this reason borrowers with a high proportion of bonds to offer as security will prefer to do business with lenders other than the banks, and may often be prepared to pay a slightly higher rate of interest than is being demanded by the banks for loans of similar character.

Short-Term Lending.—The method by which London's vast short-term loans to the Discount Market are given and taken is characteristically informal. Each morning about ten o'clock the silk-hatted brokers make a round of the offices of the banks, accepting houses and merchant bankers, to ascertain which are sellers and which are buyers of bills, what loans each bank can offer, and at what rates each is willing to lend. Most of the arrangements for accommodation, or for the sale or purchase of bills, are made during these visits, although further contracts for lending, for borrowing, or for the purchase or sale of bills, are made subsequently by telephone after the broker has finished his rounds and has ascertained conditions in the Market generally.

This morning "round" of the bill brokers may be largely a matter of custom, a relic of the days when the telephone was not so extensively used as it is to-day, although it does serve a useful function in providing personal contact between broker and banker, and it also often results in the acquisition of some useful "tips" that might not be forthcoming if deals were conducted entirely by telephone.

When terms have been arranged on a mutually satisfactory basis, a parcel of bills and/or other securities passes from the broker to the bank as security for a short-term loan which the broker will repay or renew, as the case may be, at the expiration of an agreed period.

The loans made by the banks to the brokers are classed as *weekly money*, *day-to-day* or *call money*, and *overnight money*, according to the terms of the loan.

Weekly money is, as its name implies, lent for a period of seven days, though some loans of this class are made for varying periods of from six to ten days. As a rule, weekly money is automatically renewed and the amount on the Market does not vary greatly.

Day-to-day or *call money* is lent on the condition that it may be

called for repayment *on any day*, and its quantity varies more than the volume of weekly money, although it does not fluctuate greatly from day to day in normal times. Unless day-to-day money is "called" by the lender before mid-day, the loan is automatically renewed for another day.

Overnight money is lent to the brokers on the condition either that it will be repaid the next morning or that repayment may be demanded next morning. In the latter case the loan must be "called" or renewed before twelve noon on the day following that on which it is lent. Overnight money is much more elusive than the other types of loan, fluctuating much more in aggregate amount and moving about the Market from one lender to another mainly according to the current demands on the banks for cash. Hence, it must be sought out by the shrewd broker wherever it happens to be obtainable at the moment.

Bills on the Discount Market.—A very considerable amount of bill discounting is done by the joint stock banks for their own customers. To a bank, the operation of discounting affords a most convenient and, at the same time, secure method for the employment of part of its surplus funds, because the money invested in discounts is continually flowing back into the bank's coffers as the various bills are paid at maturity. Also, all the banker needs to do in order to replenish his reserves at any time is temporarily to cease discounting. It is for this reason that loans for indefinite periods, though they may be technically repayable on a certain notice, represent a greater tie-up of capital than investments in short-term bills.

The bills which are thus discounted by the joint stock banks for their ordinary customers are not, however, those which are dealt with on the London Discount Market. The chief reason for this is that large joint stock banks never in any circumstances rediscount the bills which come into their hands from customers, this practice having been adopted because of the danger that unfavourable conclusions might be drawn if bills bearing joint stock bank indorsements were to appear on the Market. Another reason is that the joint stock banks, which are the most important factor in the Short Loan Market, prefer for their security bills which arise from the financing of overseas trade. Hence, the bills which *do* find their way to the Market are mostly bills which are drawn from abroad on London under acceptance credits with the London accepting houses, merchant banks and the overseas banks (Foreign, Dominion and Colonial) having offices in London.

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Some domestic or inland bills do, of course, find their way on to the Discount Market through the bill brokers, discount houses and other market agencies, but despite strong efforts in recent years to increase the use of domestic bills of exchange as a highly convenient means of short-term finance, the quantity of such bills in circulation and on the Discount Market is now far less than it was in pre-war days,* and the main activity of the Market in bills of exchange to-day, as always, centres around the London bank bill, representing the enormous accepting facilities granted in London to merchants and bankers at home and abroad. These bills are drawn on London accepting houses and banks under acceptance credits in respect of goods moving, not only into and out of this country, but also directly between other countries of the world. They come to the Market chiefly through the foreign and colonial banks, merchant banks and accepting houses. Many of them are purchased in foreign centres by the agents and correspondents of these institutions, while many others reach the smaller London banks and discount houses from correspondents abroad. Some of the bills are discounted by large firms direct with discount houses or brokers, whilst others are obtained by the ordinary brokers and discount houses from *running brokers*, who, as their name implies, seek bills wherever they can be found and pass them on to the brokers proper, in return for a small commission for their services as intermediaries.

We have observed that the banks which discount, or lend money on, bills for the Market look for their security to the names of the parties which appear thereon as drawer, acceptor or indorser. In the case of *bank bills*, the signatures of the accepting houses or banks are in themselves sufficient to guarantee the worth of the instruments, but even in such cases, and more particularly in the case of *trade bills*, the banks satisfy themselves that the other names are sound. In addition, the banks are secured either by a general guarantee from each broker with whom they deal, or by the indorsement of the borrower on each bill taken by them; and, though the security of a bill may not be much enhanced by the signature of a broker whose working capital is only very small in proportion to his portfolio of bills, the signature of a first-rank broker or of one of the discount houses would be regarded as "undoubted".

Commercial Bills on the Discount Market.—We have already

* In February, 1933, the late Mr. Henry Bell suggested that there was then in existence one-tenth the quantity of domestic trade bills as compared with December, 1913.

observed that commercial bills (also known as *Trade* or "*White Paper*") do not command such fine rates of discount as do bank bills. Thus, if a banker were buying a 3 months' bank bill for £100 he would quote, say, 3 % per annum, and pay, roughly, £99 5s. for the bill. If, however, he were asked to buy a 3 months' commercial bill for £100, he would quote perhaps 4 % per annum, and pay only about £99 for the bill. Moreover, the rate applied to a trade bill will vary slightly with the standing of the parties whose names appear on the instrument; the higher that standing, the lower the rate of discount and the higher the price paid for the bill. The acceptances of some first-class concerns (e.g., Union Cold Storage) are, in fact, discountable at practically the same rates as bank bills.

Clean and Documentary Bills on the Market.—Commercial bills, as we have seen (Chapter II), are of two kinds: they may be either *clean* or *documentary*, according to whether or not they have attached to them documents of title to goods. Some "clean bills" are drawn without any documents attached, whereas others are documentary bills which have become "clean" after acceptance, i.e., bills drawn "Documents against Acceptance" whose documents, after acceptance, have been surrendered to the acceptor.

The Discount Market prefers to deal in clean bills, and "Documents against Payment" bills are practically undisable. But the Market usually requires bills which are *drawn* clean to bear a statement that they are drawn against specified shipments of goods as evidence that they are clean *commercial* bills, and not mere *finance paper*, of which both the Market and bankers are wary. Such a statement is not normally necessary on accepted D/A bills, since the fact that documents of title originally accompanied a draft of this kind is evidence that the bill is the result of a commercial operation, i.e., that it is a *trade* bill.

The Market prefers "clean" paper for two main reasons: first, because the fact that a bill arising from a commercial deal is drawn clean or D/A is regarded as evidence of the standing of the drawee, since such arrangements will, as a rule, be made only where the drawee is known to be perfectly good for the amount of the bill; and secondly, because bills with documents attached (D/P bills) may be a nuisance.

Bills change hands with such frequency on the Market that it is a matter of considerable trouble to trace any particular bill; yet, if the goods covered by a D/P bill arrive *before* the bill matures, the drawee will usually wish to obtain the documents in order to clear

the goods, and for this purpose he will wish to *retire the bill*, i.e., take it up under rebate (see page 31).

On the other hand, if the goods arrive before the bill matures and the drawee does not take it up under rebate, the holder must either himself arrange for storage and insurance of the goods until the due date or see that the drawee stores and insures them on behalf of and in the name of the holder. This type of operation is outside the scope of the business of bill brokers and discount houses, and, accordingly, they avoid paper which is likely to involve them in such transactions.

Bankers and Clean and Documentary Bills.—The position of bankers is different in several respects. In the first place, they regularly handle documents of title to goods in connection with produce advances to their customers and thus have both the experience and the organisation necessary for handling bills with documents attached. Then the fact that the large British banks do not re-discount bills purchased from their customers means that no difficulty is experienced when the drawee wishes to retire a bill. Again, bankers who discount bills naturally seek to secure themselves as much as possible, so they favour D/P bills, which are backed by the security of the goods *as well as* by the names of the parties. Hence, the banks, as distinct from the discount houses and bill brokers, will readily discount D/P bills for their customers, provided, of course, they are satisfied with the standing of the parties to the bills.

There is one other factor. Where a bill is retired under rebate, the rate at which the bill is "rebated" is *lower* than the discount rate (see *ante*, p. 31), so that the holder of a rebated bill gains a slight additional profit in the form of extra interest. As D/P bills are far more usually rebated than either D/A or clean bills, this is another reason why such bills are readily taken under discount by bankers.

On the other hand, although bankers will discount D/P bills, they will more readily take bills drawn or marked "Documents against Acceptance", since the presence of the documents serves as evidence that the bill is drawn in respect of a trade deal, i.e., that it is commercial paper, while the fact that documents are to be delivered on acceptance is regarded as an indication of the good standing of the drawee. Hence, D/A bills are usually discountable at good rates.

In general, it may be said that banks prefer documentary bills, either of the D/A or D/P type, to clean bills. The danger with clean bills is that they may not be commercial paper, i.e., that they may not be drawn in respect of a commercial transaction but may be

merely finance bills. Since banks endeavour to avoid discounting finance bills, they will usually require any customer who asks them to discount a clean bill to give some assurance that it is a clean *trade* bill and not merely an *accommodation* or *finance* bill.

Foreign Domiciles.—The designation "*foreign domiciles*" is applied in our own country to those bills accepted "payable in London" by persons and firms resident abroad, while, more generally, it is applied to any bill payable in a country *other than the country of the acceptor*.

These bills have in recent years become undisable on the London Market, as the assets of the acceptors, lying abroad, are not readily available in the event of dishonour. Consequently, banks receiving them have been obliged to retain them in their portfolios until maturity, with a consequent lock-up of capital.

Similar considerations apply to the acceptances given by English branches of foreign concerns. Bills so accepted are called "*agency paper*" and often find no ready market here. Of course, foreign banks and some large commercial houses, although financed and controlled from abroad, have become well known on the Market, which, recognising their inherent soundness, will take their bills quite willingly. Even in such cases, however, the rate applied will tend to be higher than that applied to first-class English bills, and will naturally vary with the Market's estimate of the standing of the concern accepting the bill.

Forward Discounting.—An interesting procedure that has developed considerably in recent years is that of "*forward discounting*" sterling bills drawn under confirmed credits. Forward discounting consists in the sale of London bank acceptances for delivery at some future date at a rate of discount fixed at the time when the contract is arranged. It thus enables an exporter at home or abroad to fix in advance the rate at which he will be able to discount his bills upon acceptance, and so enables him to avoid any risk of loss through fluctuations in discount rates.

Foreign banks also avail themselves of forward discounting facilities by cabling to their London agents the amounts and approximate mailing dates of bills relating to forthcoming shipments. The London agent then has these bills discounted forward for the account of the correspondent bank.

The rates obtainable for forward discounts naturally depend upon the Market's opinion of the probable trend of discount rates during the period concerned; but they also depend largely upon the

maturity dates of the bills in question. For example, bills maturing a few days before the end of the year (invariably a time of monetary stringency) tend to command very fine rates.

The Importance of the Discount Market.—The London Money Market is frequently likened to a great reservoir of liquid capital, replenished from day to day from the surplus funds which accumulate in the hands of the banks, and as quickly exhausted by the funds transferred through the discount houses and bill brokers to those various agencies which bring bills of exchange to the Market to be turned into cash. The discount houses and bill brokers thus contribute relatively little to the enormous volume of capital which passes through their hands, and although the proportion which accrues to them as profit for their services may seem at times to be very low, the aggregate of the operations is sufficiently large to ensure for them a very comfortable return on the capital they do supply.

The late Mr. Otto Khan, the well-known American banker, stated that "the requisite for a great financial centre is a healthy, active and regular discount market". London has been fortunate in the fact that her Discount Market has established itself as second to none, and that it remains supreme in spite of the stress of years of unparalleled financial upheaval. The brokers and discount houses provide the banks with a first-class short-term liquid investment for their floating supplies of money. Both the amount and date or dates of repayment are arranged to suit each bank's own special requirements, enabling it to increase or decrease its cash holdings according to its own convenience.

The Discount Market places the funds so borrowed at the disposal of the overseas banks and other agencies from whom the bills are obtained by purchase or discount. In brief, it converts the short-term credit obtained from the banks into medium-term credit, of anything from six weeks to three months, transferred to the agencies supplying the bills. Both the investment and the repayment are conducted with the greatest ease and informality, yet with almost absolute reliance on the one side and the utmost confidence on the other.

By its creation of a free market for good bills and its insistence on a high degree of business integrity, combined with the fact that the sterling bill can ordinarily be converted into gold in London, the Discount Market has contributed in no small degree to the world-wide acceptability and negotiability of the bill of exchange on London. Moreover, the market organisation is so efficient and competition so keen that the rates charged for discounting the acceptances of well-known English houses are much lower than the rates charged on ordinary

commercial acceptances, and the difference is usually sufficient to recoup the trader for the cost of arranging the acceptance facilities.

Acceptance Business essentially British.—Before the Great War, the provision by bankers of acceptance facilities was an essentially British business, and London was practically the only Discount Market in the true sense of the term. No other financial centre, not even Paris, had a Discount Market in the sense that bills of exchange could be freely and actively dealt in therein. Since the Great War, however, several financial centres have sought to imitate London in developing acceptance facilities and in organising a Discount Market, notably Paris and New York, and, to a less extent, Amsterdam and Stockholm. Among the incentives were the desire to obtain some of the lucrative business which has so long flowed to London; the desire to increase the supplies of prime bills with their advantages as a means of granting credit and as a means of liquid investment; the prevalence of very low discount rates and the short supply of short-term investments.

Moreover, other centres were naturally encouraged to compete for London business at times when confidence in sterling and in British institutions was at a low ebb. From the close of the War until about 1927, New York made great headway, and attracted to herself not only the bulk of long-period lending but also some of London's acceptance business.

Fortunately for us, foreign acceptance business in New York is such a recent development that it is not nearly so important to the functioning of the Market as it is in London. In New York, the banks employ the bulk of their surplus funds in loans at call to the Stock Market against the security of stocks, shares and bonds; only to a much smaller extent do they depend on bills of exchange as an outlet for their funds or as security for their loans. The London Market, however, grew up and prospered on London bank acceptances, and though their place has now been largely taken by Treasury Bills, commercial bills are still greatly in demand and are so essential to the work of the Market that strong efforts are being made to increase their numbers.

London's position was improved after our return to gold in 1925, but with the revaluation of the franc in 1927 (one of the cleverest international financial operations ever carried out) the French Government placed Paris in an extremely strong position. Having, by that devaluation—a mere stroke of the pen—secured at no cost the greatest stock of foreign currencies in the world, the Bank of France aimed at making Paris the universal clearing house outside the American

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continent, and the great European acceptance market. But it is one thing to have goods and another thing to be able to sell them. France had plenty of gold and almost unlimited credit, but as she has only 6 or 7 % of the world's trade, scarcely any of the world's inhabitants thought of going to Paris for exchange and acceptance facilities.

The greatest handicap from which Paris suffered, however, was the fact that she has virtually no Discount Market. In the absence of such a Market domestic bills cannot be regarded as a liquid investment unless the central bank is prepared to provide generous rediscount facilities. But the French commercial banks and other market agencies always avoid having to re-discount bills with the Bank of France, because that bank (with numerous branches) is not only an active competitor of the commercial banks but also charges them 2 % above the official discount rate if they have to apply to it for accommodation. Hence the French banks rely mainly on balances held in (or first-class bills on) foreign centres such as London for their "second line of defence", and their actions and attitude in this respect have naturally done nothing to foster the growth of French acceptance business on foreign account.

Ultimately, the position in 1927-1931 was that Paris ranged herself in support of London in its rivalry with New York, but following our departure from the gold standard in September, 1931, London suffered a severe setback. New York and Paris now drew together in defence of the gold standard and London lost a great deal of business. During 1932 and 1933, however, the wonderful recovery made by Britain evoked world-wide admiration. Business gradually returned to London, and sterling, despite its divorce from gold, climbed back to its old position of pre-eminence. The discomfiture of the dollar was complete when the American crisis of 1933 brought that country to the verge of disaster,* whilst Paris, intent on retaining the gold standard in the face of every opposition, has been very sorely pressed from every direction. At the time of writing, therefore, there is no reason to fear that London will lose much, if any, of her great acceptance business to those who so ardently seek to obtain it, and though the London Discount Market suffers from the great decline in the number of bills which has resulted from the falling off in international trade, the Markets in other centres have suffered to a far greater extent.

One of the main reasons for this is that the essential condition of

* Between the end of 1929 and the end of 1933, the total value of American bankers' acceptances (as reported to the American Acceptance Council) declined from \$1,732,436,388 to \$764,110,568—a decrease of nearly \$1,000,000,000.

a good Discount Market, as of any other Market, is a *large and steady turnover*, but this, whilst already assured to London by reason of her established reputation and long experience, can scarcely be obtained by each one of several centres which are actively competing for the available world business. Moreover, in no centre other than London are to be found so well developed the essential conditions for the perfecting of a great financial market, viz., ample credit resources available for lending abroad; an adequate and efficient banking organisation; freedom of the financial market; an investing public willing to acquire and to hold foreign securities; a stable currency; an efficient foreign exchange market; political stability, and a deep sense of international co-operation.

THE BANK OF ENGLAND.

Occupying the pivotal position in the London Money Market, maintaining a close watch on all its operations and intervening when necessary as a lender or as a borrower, is the Bank of England, proudly and honourably distinguished in this country as *The Bank*. As the corner-stone of our English banking system and the foremost banking institution in the world, the Bank of England naturally exercises a most profound influence on the whole of the Market's business—and this, not so much by virtue of legal authority and statutory enactment, as by an informal, characteristically British reliance on a moral leadership established by custom and universal consent.

For, in spite of appearances to the contrary, the Bank of England is entirely a private concern, managed for the benefit of its stockholders by a Court of Directors consisting mainly of merchant bankers chosen from the City. But inasmuch as it transacts the financial business of the State and is in the most intimate relationship with all the other banks of the country, the Bank of England has certain duties and heavy responsibilities thrust upon its shoulders, which are unshared by the other banks. Although most intimately connected with the Money Market, the Bank is not usually regarded as part of it, and its policy sometimes runs counter to the immediate interests of the brokers and others in the Market outside.

The Bank performs most of the usual functions of an ordinary bank, accepting money on current account from its various customers, and employing that money, as well as the capital subscribed by its proprietors, in discounting bills and in making advances against security. Apart from other considerations, however, the Bank differs from the other leading English banks in that it is privileged to enjoy

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the monopoly in England and Wales of the right to issue bank notes, and that its notes are the only form of legal tender paper currency in Great Britain and Northern Ireland.

In its ordinary loan operations, the Bank comes into competition with the banks and dealers in the open Market, but in normal circumstances the banks and other market lenders are able to outbid the Bank and so to secure the bulk of the business which is offering from time to time.

At times, the large banks and other lenders on whom the Market is accustomed to depend for its supplies of floating money find it necessary to reduce the quantity of money which they place at the Market's disposal. This means that the bill brokers are deprived of a part (frequently a large part) of their working capital, but, as they must continue their business, they apply for accommodation to the Bank of England, which, as the central reservoir of credit, is always ready to re-discount eligible bills at its official rate, or to grant advances for not less than one week against approved bills of exchange or other forms of security for approved members of the Market. In these circumstances, the Market is said to be "*in the Bank*", and, as Bank rate is always higher than Market rate whilst the Bank charges $\frac{1}{2}$ % above Bank rate for advances (as distinct from discounts), being "*in the Bank*" is never a pleasant and is always an expensive experience for market borrowers. It is at such times that the Bank is able, by dictating its own terms for granting the required accommodation, to force the Market to follow its lead in the matter of credit policy (see Chapter XVII). The function of re-discounting is, therefore, a highly important factor in the Bank's control of credit, and it constitutes one of the main elements in the elasticity and world supremacy of the London Discount Market.

The Bank of England's Note Issue.—Since its formation in 1694, the Bank has been governed by a Charter which has been subject to revision from time to time. The most drastic revision took place in 1844 as a result of the financial disasters which followed the Napoleonic Wars and the subsequent prolonged controversy on the subject of the control of paper currency. The Bank Charter Act of that year rigidly regulated the bank note system, and provided for the gradual but ultimate extinction of all private issues and the centralisation of bank note issues in the hands of the Bank of England, an aim which was achieved in 1923.

The Act ensured that there should be adequate publicity as to the state of the Bank's issue by providing for the weekly publication of the

"Bank Return". By this Act, also, the Bank was permitted to make a "fiduciary" issue, i.e., to issue a certain amount of notes against a backing of Government securities; but the rest of its issue had to be backed pound for pound by gold (or by silver to the extent of one-fourth of the gold held).

For many years before the Great War, the Bank of England note was fully convertible into gold coin or bullion on demand, and so faithfully was this obligation carried out that the Bank's notes came to be regarded, not only in this country but also in other countries, as being "as good as gold".

From the outbreak of the Great War in 1914 until 1928, Bank of England notes ceased to be the only form of paper money in England and Wales; during those years they circulated side by side with the Treasury notes issued by the Treasury in 1914 in order to fill the gap in the currency caused by the withdrawal of gold from circulation and to meet the greatly increased demands for currency.

Naturally, as soon as reform and deflation were contemplated after the excesses of the war period, there arose the question of amalgamation and centralisation. In 1918 it was recommended by the Cunliffe Committee on Currency and Foreign Exchanges that this should be accomplished by the transfer of the Treasury note issue to the control of the Bank of England as soon after our return to the gold standard as possible. Further, the machinery set up by the Bank Charter Act, 1844 (though otherwise highly commended), was criticised on the grounds that by tying the issue of bank notes to gold it gave us a very inelastic currency: if sudden expansion were desired, the only way to increase the fiduciary issue was to suspend the Bank Act.

The Gold Standard Act, 1925.—Following the recommendations of the Cunliffe Committee of 1918 and of the Committee on the Currency and Bank of England Note Issues of 1925, Great Britain, by the Gold Standard Act of April, 1925, abolished all restrictions on the export of gold, and adopted a *gold bullion standard*.

This Act provided that gold bullion could no longer be taken to the Mint for conversion into coin by anyone except the Bank of England, but that it could still be offered in unlimited quantities to the Bank, which was to buy it at the rate of £3 17s. 9d. per standard ounce; that both Bank of England notes and Treasury notes were to be inconvertible into gold coin; and that holders of "any legal tender" (i.e., Bank of England notes, Treasury notes and sovereigns) could demand from the Bank in exchange gold bars, containing approximately

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400 oz. of fine gold (approximately £1,700) at the price of £3 17s. 10½d. per standard ounce.

The Currency and Bank Notes Act, 1928.—Three years after our return to gold, it was considered that the time had arrived for the centralisation of the note issues, and in 1928 the Currency and Bank Notes Act was passed. Briefly, this Act provided that:—

- (1) All outstanding notes issued under the Currency and Bank Notes Act, 1914, were to be deemed to be Bank notes, and the Bank was made responsible for their repayment.
- (2) To regularise this action, the Bank of England was empowered to issue notes for one pound and ten shillings. These notes were made legal tender for any amount in England, Scotland and Northern Ireland, and by the Bank or any branch of the Bank, even in payment of its larger notes. Moreover, the £5 Bank note was made legal tender *for any amount*; not, as had previously been the case, for amounts of over £5 only.
- (3) The Bank was authorised to issue Bank notes up to the amount of gold coin and gold bullion (and not gold *or silver* as under the Bank Charter Act, 1844) held in the Issue Department, and, in addition, to issue notes against first-class securities to the amount of £260,000,000.
- (4) The securities behind this fiduciary issue of £260,000,000 could include silver coin to an amount not exceeding £5,500,000 (the amount then held in the Currency Note Redemption Account).
- (5) The profit arising out of the note issue was to accrue to the Treasury, as before.
- (6) Subject to Treasury sanction, the Bank was to be permitted to issue notes to a specified amount in excess of the fiduciary issue of £260,000,000 for a period not exceeding six months, but any such sanction was to be immediately communicated to Parliament. Any authority so given could be renewed for further periods of not exceeding six months, provided that no expansion of the fiduciary circulation remained in force for more than two years without express Parliamentary sanction.*
- (7) The Bank was given power to require particulars of any holdings of gold exceeding £10,000, and, unless the gold was held for

* Advantage was taken of this provision in August, 1931, when the fiduciary issue was increased to £275,000,000. The fiduciary issue remained at this figure until March, 1933, when the increase was allowed to lapse and the normal figure of £260,000,000 was restored.

immediate export purposes or industrial purposes, or was the property of any foreign national bank or person, the holder could be compelled to sell the gold to the Bank at the statutory price.

By virtue of the provisions of the two Acts referred to, the position at the present time is that the Bank is permitted to issue notes to a fixed amount of £260,000,000, against a reserve consisting of first-class securities and an amount of silver coin not exceeding £5,500,000. All other notes must be covered pound for pound by gold held by the Bank.

The Gold Bullion Standard.—The practical effect of the 1925 provisions was to make the Bank's notes convertible into gold for export purposes only, so that gold was not available for internal circulation in this country. In other words, a *gold bullion standard* replaced the pre-war full gold standard under which gold sovereigns circulated side by side with, and were freely interchangeable for, Bank of England notes.

An important result of the 1928 Act was to enable the Bank of England to meet internal demands for legal tender, not by issuing gold sovereigns, as was the case in pre-war days, but by issuing notes of smaller denomination. The Nation's gold holdings were thus mobilised for the vital purpose of maintaining our exchanges with other nations, and while the domestic use of gold was restricted, the country obtained the full benefit of the gold standard for external purposes. The effect of the restriction that only the Bank could present gold to the Mint for coinage was that gold entering the country was diverted into the Nation's central reserve instead of into domestic circulation in the form of newly coined sovereigns.

Suspension of the Gold Standard.—This position continued until September, 1931, when the gold standard was suspended by the passing of the *Gold Standard (Amendment) Act, 1931*, the effect of which was that the Bank of England was relieved of its obligation to sell gold bullion in exchange for its notes. No change was made in regard to the Bank's obligation to issue notes in exchange for gold, but this, of course, is merely of theoretical interest, for the immediate result of our departure from gold was to send up the market price of gold far above the Bank of England's buying price, so that no one would offer the Bank gold at its legally fixed rate.

Nowadays the vast quantities of gold which are taken by foreigners from London are purchased in the London Bullion Market, whither the gold is sent from abroad for disposal. As the Bank is relieved of its obligation to pay out gold in exchange for its notes, bullion or coin

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can be withdrawn from the Bank only as a special operation on behalf of the Bank itself or of the Government.

The Bank Return.—Since the Bank of England acts as banker for the State, and is also a bank of issue and the leading banking concern in the kingdom, it is only just that its financial position should be frequently disclosed. The Bank is, therefore, compelled by law to issue a weekly Return, in which the liabilities and assets of its two legally constituted departments, viz., the Issue Department and the Banking Department, are specified separately.

This statement, known as the "Bank Return", is issued on Thursdays after the Bank Court has been held, and is published next day in the principal newspapers. The form of the Return remained unchanged from 1844 to 1928, when it was slightly modified on the coming into operation of the provisions of the Currency and Bank Notes Act. A specimen of its present form is shown on page 349.

The Bank Return is of such great importance to our bankers and financiers that it has been described as the "Barometer of the Money Market". This is partly due to the fact that the gold coin and bullion held by the Bank in the Issue Department represent practically the whole of the Nation's stock of gold, and (when we are on the gold standard) is liable to be drawn upon by anyone in this country or abroad who possesses a sufficient amount of the Bank's notes, which, as we have seen, are promises to pay gold.

ISSUE DEPARTMENT.

The first item on the right-hand side of the statement, the *Government Debt*, has been unchanged since 1844. It represents the amount which the Bank had advanced to the King and Government up to that date, and was largely responsible for the various privileges accorded to the Bank after its inception. It is not represented by any specific Government securities and bears interest at $2\frac{1}{2}\%$.

Other Government Securities and *Other Securities* are the items which fluctuate from time to time with changes in the Bank's fiduciary issue. The Government Securities held by the Issue Department are, of course, entirely independent of those held in the Banking Department (see opposite). Most of this item consists of Treasury Bills, though it also includes other long- or short-dated securities, while Other Securities include first-class bank and commercial bills of exchange, both in sterling and in foreign currencies.

Silver coin is limited by the Act of 1928 to a *face value* not exceeding £5,500,000.

These four items together make up the security for the fiduciary issue, i.e., the fixed amount of notes the Bank is legally empowered to issue without a gold backing. All notes issued beyond this amount must be covered pound for pound by gold.

The most important item in the Return of the Issue Department is

BANK OF ENGLAND

Return for Week ended Wednesday, 7th March, 1934.

ISSUE DEPARTMENT.

£		£	
Notes Issued —		Government Debt	11,015,100
In Circulation	370,219,833	Other Government Securities	245,084,493
In Banking Department	80,759,506	Other Securities	357,410
		Silver Coin	3,542,997
		Amount of Fiduciary Issue	260,000,000
		Gold Coin and Bullion	190,979,339
	<u>£450,979,339</u>		<u>£450,979,339</u>

BANKING DEPARTMENT.

£		£	
Proprietors' Capital	14,553,000	Government Securities	76,729,732
Rest	3,684,382	Other Securities—	
Public Deposits *	21,811,071	Discounts and Ad-	
Other Deposits —		vances	5,800,140
Bankers	99,737,518	Securities	12,029,441
Other Accounts	36,573,912		<u>17,829,581</u>
	130,311,430	Notes	80,759,506
7-Day and Other Bills	1,029	Gold and Silver Coin	1,042,093
	<u>£176,360,912</u>		<u>£176,360,912</u>

* Including Exchequer, Savings Banks, Commissioners of National Debt and Dividend Accounts.

the *Gold Coin and Bullion*, which represents virtually the whole gold reserve of the Nation.

BANKING DEPARTMENT.

From the standpoint of the Bank's stability, the most significant items appear in the Banking Department section of the Return. The left side shows the amounts which are due by the Bank to its shareholders and to its customers (including the Government); on the right-hand side are shown the ways in which the Bank has invested the money it has borrowed. The item described as *Rest* comprises the Bank's Reserve Fund, representing the accumulation of undivided profits since its formation, together with the balance of its current Profit and Loss Account. In recent years, the Rest has never been allowed to fall below £3,000,000.

Public Deposits, as is explained by the footnote to the Return, includes the balances held to the credit of the Government Departments. They vary with the collection of income tax and the payment of Government Dividends, and with Government borrowing from the

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Bank on "Ways and Means" advances. The weekly payments by the Market for Treasury Bills allotted, and the payments made by the Treasury in respect of Treasury Bills matured, necessarily have an important influence on this item. If the amount of such bills allotted in any week exceeds the total maturities, then Public Deposits are likely to rise, as the Market will be paying the Treasury more than the Treasury will be paying out. If, on the other hand, the Treasury pays out more in respect of matured Treasury Bills than it receives for new allotments, Public Deposits are likely to fall. It is not, of course, possible to say definitely that there will be a rise or a fall, as other factors may be in operation, e.g., a large inflow of revenue may more than counterbalance excess payments made in respect of Treasury Bill maturities.

Other Deposits include the balances held by the Bank on behalf of other banks, together with the credit balances of all of its other customers except the Government. From the purely banking standpoint, these items are more in the nature of current account balances than deposits, since they are withdrawable on demand and no interest is allowed thereon by the Bank.

The item *Bankers' Deposits* is, from several points of view, by far the most important in the Return. The figure includes the balances of all the London clearing banks, the other English joint stock and private banks, and the Scottish and Northern Irish banks. The balances of banks which operate mainly abroad, including those of foreign commercial and central banks, are comprised in the item *Other Accounts*, which also include the deposits of the Bank's private customers, the merchant banks, discount houses, insurance and trust companies, and foreign and colonial Governments, together with the dividend accounts of non-Government stocks managed by the Bank.

The importance of the figure of Bankers' Deposits lies, first, in the fact that the Bank's control of credit depends very largely on its power to induce fluctuations in the amount of these balances, which are regarded by the other banks as being to all intents and purposes as good as cash, and, therefore, capable of being used as a basis for the creation of credit. Secondly, the level of Bankers' Deposits affords most valuable information as to the amount of disposable funds on the Market and as to the probable attitude of the banks to prevailing economic conditions.

A high level of these Deposits, taken in conjunction with other factors known to market men, may presage either conditions of ease owing to an excess accumulation of surplus funds by the banks, or it

may presage stringency ahead because the banks are for some reason strengthening their reserves by calling in funds from the Market. If the high level of Bankers' Deposits coincides with a reduction in Public Deposits, it may indicate heavy Government disbursements (such as 3 % Conversion Loan interest payments), or it may be due to an excess of Treasury Bill maturities over re-investments therein.

On the other hand, a *low* level of Bankers' Deposits may indicate that bankers, having no immediate apprehensions as to the course of monetary conditions, are employing their funds to the full on the open market, or it may afford evidence that floating money is in short supply and that conditions of stringency are ahead. Such conditions may arise when bank balances are being depleted by revenue payments, or when more market money is being re-invested in Treasury Bills than is being received from maturities, in both of which cases Public Deposits will, of course, be increased at the expense of Bankers' Deposits. Clearly, it is impossible to decide merely from the appearance of this item. As in the case of other items in the Return, its significance must be judged in conjunction with other portents before any accurate conclusion can be reached. As will be explained later, the Bank is in a position, by means of its *Open Market Policy*, to vary the level of Bankers' Deposits at will, and so to vary the volume of credit. Hence, nowadays, any marked movement in the total of these funds can be attributed to the policy of the Bank in seeking to expand or to restrict credit, as the case may be.

Seven-day and other Bills are chiefly Bank Post Bills at seven or sixty days' sight issued by the Bank of England and usually requiring acceptance. They were originally issued in order to prevent loss by theft of money in transmission, but are nowadays chiefly used by persons travelling abroad and occasionally for domestic transfers. The amount is always small.

On the assets side of the Return of the Banking Department, the first item, *Government Securities*, includes Ways and Means Advances to the Government, together with the Bank's holdings of Government stock, Treasury Bills, etc., acquired by the Bank on its own initiative (as distinct from those presented to it for discount).

The total under this heading fluctuates markedly with operations undertaken by the Bank in pursuance of its open market policy, and also with Government financial operations. When the Government borrows from the Bank (e.g., on Ways and Means Advances), the Return shows an increase in Government Securities and either in Public Deposits or in Other Deposits. Public Deposits will show the

increase until the borrowed funds are paid away by the Government, when the total of Other Deposits will rise. When the sums so borrowed are repaid, the fall in Government Securities will be accompanied by a decrease in Public Deposits or Other Deposits.

The total under the heading *Other Securities* represents the Bank's investments in *Securities*, which comprise the following securities purchased by the Bank on its own initiative, viz., Indian, Colonial or foreign securities, miscellaneous securities and commercial bills (i.e., first-class bills *other* than Treasuries), and also its *Discounts and Advances*, which include Treasury Bills and bills of exchange brought to the Bank for discount, together with advances made to the Discount Market and to private clients.

A rise in Discounts and Advances, accompanied by an increase of approximately the same amount in Bankers' Deposits, is a sure sign that the Market is "in the Bank", while corresponding falls in these two items indicate repayments to the Bank of market loans.

The Bank Reserve.—The two items which appear last on the assets side of the weekly statement are the vital part of the Return, and constitute what is known as the *Bank's Reserve*. They are the only liquid assets available immediately to satisfy the demands of the Bank's creditors. All its other funds are locked up in securities, and the whole of the gold in the Issue Department is held against the Bank notes which are in circulation, or which are held in the Banking Department. The amount of Bank notes held by this Department can be exchanged for gold by presenting them to the Issue Department; but no more of the gold held by the Issue Department is available for the Bank's own purposes than this amount; the rest is held to secure the notes held by the general public and by other banks. The notes and gold held by the Banking Department are regarded as a Reserve, not only by the Bank of England, but also by the other banks in the country, owing to the peculiar position of the Bank of England as the holder of their surplus funds. In brief, this reserve constitutes the Nation's sole cash reserve against the whole of its bank credit. *Gold and silver coin* represents the coin required for day-to-day transactions.

At the date of the Return reproduced here, the Reserve of £81·7 millions is held against liabilities on Public and Other Deposits totalling £158 millions, the whole of which is repayable on demand. The ratio between these two items—universally referred to as "*the Proportion*"* and standing at 51·7 % in the Return here given—

* The ratio between the total gold stocks held by the *Issue Department* and the total of the Bank's outside liabilities (i.e., notes issued, deposits and seven-day bills) is known as the "reserve ratio". By some authorities this ratio is considered to give a clearer indication of the strength of the Bank's position.

is of the utmost importance to the financial and commercial community, since it is, without doubt, the main factor determining the Bank's current credit policy.

The Bank of England—the Bankers' Bank.—In this country, an engagement to repay money is an undertaking to pay in legal tender on demand. Bankers who accept deposits from their customers do so on the understanding that they will repay the money in legal tender either on demand, or at notice, according to whether the money is placed on current account or on deposit. In practice they find that only a small proportion of the money is demanded at one time, and after apportioning a certain amount as till money to meet ordinary demands, employment is found for the surplus by investing it in various securities, and by using it in granting advances and loans.

All the banks find it convenient to leave a floating surplus of this money at the Bank of England, as a fluctuating balance on current account.* The aggregate amount so left is a large sum, the whole of which is treated by the bankers as equivalent to cash, capable of withdrawal whenever necessary in legal tender on demand. In spite of this, the Bank of England treats the banks as ordinary customers, and makes no special provision to meet any demands which may arise. On the other hand, the banks are accustomed to regard their balances at the Bank of England as equivalent to actual cash, and always look to these balances to furnish them with any extra funds which they may require. If an extraordinary demand for money arises in any part of the country, it is passed on through the branches to the head offices of the banks, who fall back for supplies on their balances at the Bank of England. The Reserve of the Bank of England is therefore liable to be drawn upon at a moment's notice to supply the extra monetary requirements of the whole nation.

Demands for Currency.—In normal times, demands for money throughout the country are fairly steady, and it is possible for well-informed persons to gauge fairly accurately the requirements of the nation for ordinary purposes, such as for the payment of wages and salaries, and for making everyday purchases and payments. It is also possible to judge certain periodical demands, such as those which arise in the harvest season for the payment of extra wages, and in the holiday season, for spending on amusement and enjoyment. But extraordinary demands are more difficult of appraisal.

In ordinary circumstances, credit documents such as cheques, bills and promissory notes form a large part of the media of exchange

* The Bank allows no interest on these deposits, and insists on the maintenance of a minimum balance.

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whereby commercial transactions are effected, and people accept these documents quite readily, in the belief that they will be paid in due course. The value of these instruments depends on the trust reposed in the parties to them. As soon, therefore, as any event or events occur which disturb credit, and make people apprehensive and suspicious, credit instruments fall into disfavour, and a heavy demand arises for legal tender. The banks take immediate steps to increase their till money, and to do that they draw on their funds at the Bank of England, and so deplete the Bank's Reserve.

Apart from obtaining Treasury sanction to increase its fiduciary issue, the Bank has no absolute means of meeting a serious drain on its Reserve as a result of such an extraordinary demand, but, when we are on the gold standard and the Bank is obliged to pay out gold on demand, internal demands are not nearly as important as heavy demands from abroad. When, in such circumstances, a heavy demand from overseas coincides with an extraordinary internal demand, the position may become extremely acute, and it is then that strong protective measures are necessary (see Chapter XVII).

When we are on the gold standard, a foreign demand on the Bank of England's gold usually arises when sterling has become relatively cheap in foreign centres, and the outgoing specie point from London has been reached. Banks and bullion dealers then undertake shipments of gold which they purchase from the Market so long as the market price is lower than that of the Bank of England; but when market supplies are exhausted they buy the metal from the Bank of England at its statutory price, paying for it out of their balances with the Bank or with other bankers or with funds moved to London from other centres. Apart from shipments undertaken for the purpose of realising a profit (known as *bullion arbitrage*), gold may also be demanded for other purposes, as, for example, to increase the reserve of a foreign central bank; to meet the insatiable demand of India's gold-hoarding population; to provide the basis for a note issue in South America; for currency in a new country which prefers to leave the trouble of coinage to us; or for industrial purposes. In normal times, whenever gold is required abroad, the call usually falls on London as the world's leading gold market,—a position achieved largely by reason of the fact that it was for many years before the Great War the only *free* gold market in the world.

CHAPTER XVI

THE LONDON BULLION MARKET

THE London Bullion Market is the specialised section of the London Money Market, where certain long-established firms of world-wide reputation conduct highly centralised operations in gold and silver bullion.

Britain's financial and industrial leadership, her steadfast championship of the gold standard and the fact that nearly three-quarters of the world's gold is produced in the British Empire, had the natural result of establishing London as the world's largest bullion market, to which a large part of the world's newly produced gold naturally gravitates for sale. And while these factors contributed very materially to the maintenance of the prestige of the Market, the existence of the Market has been a very potent stimulus to the growth of London's financial supremacy.

Similar factors operated in the case of silver. Although very little of the world's silver supply comes from the British Empire, the fact that London established so high a reputation as a gold centre, together with Britain's intimate ties with the great silver countries of the East, led to the establishment and growth in London of an unrivalled silver market. As a result, practically the whole of the world's silver production is now marketed in London, her brokers fixing the prices of the metal for the whole world.

Strange as it may at first appear, our suspension of the gold standard in 1931 has not seriously affected the operations of the Bullion Market, since the market for gold is still free and the import and export of gold are unrestricted. There has, of course, been a marked rise in the *price* of gold on the London Market, owing to the depreciation of sterling, but this has not affected dealings.

The London Gold Bullion Market.—All dealings in gold bullion on the London Market are conducted by four long-established firms of bullion brokers, Messrs. Mocatta and Goldsmid (est. 1684), Messrs. Sharpes and Wilkins (est. 1796), Messrs. Pixley and Abell (est. 1852)

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and Messrs. Samuel Montagu and Co.* (est. 1853). So high is the reputation of these firms and so efficient is their manner of business, that they are relied upon implicitly by banks and others who undertake dealings in gold and silver, not only for the actual conduct of such dealings, but also for the fixing of the price of gold bullion from day to day.

Two other important constituents of the Market are the two firms which own refining plants in London, i.e., the well-known banking partnership of Messrs. N. M. Rothschild & Sons, which has long undertaken highly important transactions in gold; and the firm of Johnson, Matthey & Co., Ltd., which has large refineries in London and in other parts of the world. Both these firms and the bullion brokers work in close association with the Bank of England.

The fixing of the daily price of gold bullion is characterised by a remarkable informality which is at once evidence of the reliance placed upon the dealers concerned as well as an indication of the extraordinary centralisation of the market. Every morning at 11 a.m. (10.30 a.m. on Saturdays) the bullion brokers assemble at the offices of Messrs. Rothschild. Each broker then declares the quantity of bullion which he has either to buy or to sell, and, after some discussion and due consideration of the London Market position, i.e., the relation between the total supply thereon and the total demand, the price for the day is fixed by general consent. The most important market day is Tuesday, when the weekly Cape shipment which arrives in London on Monday is put up for sale, for the bulk of the gold imported into this country comes from the mines of the Transvaal, which produce about one-half of the world's total yearly output.

The London price of gold is quoted in terms of shillings and pence per fine ounce troy, for gold in the form of fine bars or ingots of approximately 400 ounces. Most dealings in gold bullion are for cash, since there is normally no forward market, but during 1931, when special circumstances made forward transactions in gold profitable, it became quite a common practice for gold in course of shipment from the Cape to be sold "for arrival". In some cases, though the gold was sold forward in London, it was shipped direct to the buyer—usually on the Continent. Forward transactions are comparatively uncommon at the time of writing.

The Bullion Market quotes its prices for *fine* gold, and not for British *standard* gold (11/12ths fine), for two reasons. First, because

* Messrs. Samuel Montagu & Co. carry on a banking business in addition to their bullion broking.

a large proportion of its dealings are in the pure metal received from the refineries, and secondly, because standards of fineness are not the same throughout the world, and it is, therefore, most convenient that transactions on the leading market should be effected and prices quoted in terms universally applicable. On the other hand, the Bank of England prices are for British standard gold, 11/12ths fine, for the reason that the Bank ordinarily buys and sells gold in the form of sovereigns or bars of this standard fineness.

Whilst we were on the gold standard, the fact that there existed in London legally fixed prices at which the Bank of England was obliged to buy and sell gold, necessarily imposed limits to the price of gold in the open market. The Bank, it will be remembered, was obliged by the 1928 Act to buy gold at £3 17s. 9d. and to sell gold at £3 17s. 10½d., per standard ounce troy, 11 12ths fine. The equivalent prices per ounce of *fine* gold are 84/9-818½d. for buying, and 84/11-454½d. for selling, so that sellers were not likely to accept less in the open market than the former figure, while buyers (who could obtain gold from the Bank) were not likely to pay the bullion dealers more than the Bank's selling price.

Another result was that, so long as no abnormal circumstances existed which interfered with the Bank's power to buy and sell gold, variations in the price of gold on the open market were possible only because the Bank of England quoted slightly different prices for buying and selling. If these prices had been identical, the market price could not have differed from the Bank of England price. This was exemplified in the case of New York, where gold was freely bought or sold by the United States Treasury at the fixed price of \$20·67183 per fine ounce, with the result that all transactions in gold in that centre were effected at this fixed price.

The removal of the Bank's obligation to *sell* gold has abolished the *upper* limit to the sterling price of gold. The lower limit remains, of course, though it will not be of any importance unless and until sterling recovers.

World Movements of Gold.—The disposal of gold on the Bullion Market will be more clearly understood if it is appreciated that movements of gold between the countries of the world may take place independently of the specie points, and that gold moves from one country to another for reasons other than that the state of the exchange rates has rendered gold shipments profitable. International gold movements may, in fact, belong to one of several categories.

Marketing Movements.—First, we have the shipments of the metal

from the sources of supply in the gold-mining countries to a gold bullion market as, for example, from South Africa or Australia to London. In this case, the gold is merely an ordinary commodity import and export, although it is one of such a special character that it is always given prominence in the trade returns of the nations concerned.

The flow of gold from the mining countries to the Bullion Market marks the first step in what we may call the economic life of the metal, and by far the greater part of it finds its way to London. There are two important reasons for this. In the first place, most of the world's gold is mined in new countries, such as South Africa and Australia, which have no highly organised bullion markets of their own, and must, therefore, market the metal abroad. And the London Bullion Market is chosen because it stands pre-eminent for its extent and freedom, for the experience and reliability of its members, and for the fact that it attracts buyers and sellers from every part of the world.

In this first category we may also place movements of gold from the producing countries, or from the Bullion Market, to India or China, where the metal is sold in large quantities for hoarding purposes, as well as for personal adornment and ornamental uses.

Industrial Transfers.—The second class of gold movement comprises that in which gold, like any other metal, passes from one country to another purely as a raw material for industrial purposes, as, for example, gold imported into Switzerland for watch-case making, and into other countries for use in jewellery manufacture and dentistry. In this case, also, the transfer is regarded by the countries concerned merely as an ordinary trade import or export, although recorded specially in the trade returns.

Banking Operations.—In the third class are gold shipments which are essentially banking operations, as, for example, those made to strengthen or to establish the metallic reserves of a central bank or other bank in a gold standard country, or those which merely represent the transfer of part of a bank's gold balance or reserves from one centre to another. In such circumstances, gold may be moved whether the exchange position favours such a movement or not. The transfer takes place not purely as the result of the working of ordinary economic forces through the exchange rates, but essentially to meet the convenience or requirements of the bank responsible for the shipment. If a newly established central bank must have gold to form a basis for its credit operations it will naturally obtain that gold even though

the position of the exchanges may render the import a relatively unprofitable operation.

Bullion Arbitrage.—Finally, we have the most important class of all, comprising shipments of gold which take place when the exchange rates diverge so far from the mint parities as to render the movement of gold profitable.

In this connection it is necessary to emphasise that, while the movement of gold from one country to another tends to redress an adverse balance of indebtedness, it is quite wrong to suppose that gold is ever sent *deliberately* with that motive. Gold moves simply as a result of the play of natural economic forces. Provided that it can be freely obtained and that there are no restrictions on its import, it will be sent as soon as bankers and bullion dealers decide that it is *profitable* to make the shipment, i.e., when the demand for remittances from the country at any given moment is sufficiently large to cause the exchange rate to move beyond specie point, a fact which itself is a result of a mal-adjustment of indebtedness between the countries concerned.

Once the metal has reached the Bullion Market it will move according to the strength of the demand in one of the other three categories. Since the bulk of the gold on offer on the Market emanates from the same source, there is little in the way of competition among sellers, but there is occasionally keen bidding from would-be buyers for the quantity available. As a rule, there is a fairly regular demand for industrial purposes and for shipment to India or other Eastern countries. But neither of these absorbs more than a small proportion of the weekly supply, most of which is taken, in normal times, by the Bank of England either to strengthen its own reserves or on behalf of a so-called "*undisclosed*" buyer. The latter term is one which frequently occurs in the Bullion Market reports, and it stands for one or other of the foreign central banks, which, usually through the agency of the Bank of England, is in process of strengthening its gold reserves by purchases from the London Market, i.e., converting part of its sterling balances into gold bullion.

Before we suspended the gold standard, the Bank used automatically to take at its fixed buying price any balance of gold left over after the requirements of the trade, of India and of other buyers were satisfied. But it sometimes happened that a strong demand from other quarters prevented the Bank from obtaining any part of the supply, either for itself or for its customers. Such conditions arose mainly when one or other of the gold exchanges was so adverse to this country that exports

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of gold could profitably be undertaken, and bullion arbitrageurs were able to offer more than the Bank's statutory buying price. In such circumstances, the gold available was taken off the Market by the highest bidder or bidders.

As a rule, the Bank did not bid for gold in competition with outside interests, but there was nothing to prevent it from buying gold at a price slightly in excess of its statutory buying price.

Now that the market price of gold has risen far above the "Bank of England Price", the Bank cannot obtain any of the gold which comes on offer unless it will pay the market price. It is interesting to note in this connection that the Bank is now indemnified against the paper loss which it suffers when it pays, say, 30s. for gold which must appear in its books as £1. This indemnity was given to the Bank by virtue of the *Finance Act*, 1932, which authorised the setting up of the *Exchange Equalisation Account*, the funds on which were to be used, *inter alia*, to indemnify the Bank for losses incurred in the manner described (see Chapter XX).

The Price of Gold and the Foreign Exchanges.—So long as gold can be purchased in London, there is an important connection between the price of gold in London and the sterling rates of exchange with the principal "gold" currencies. Other countries which seek to obtain gold from London must do so by the purchase of rights to sterling in the Foreign Exchange Market, and by subsequently using the sterling proceeds to buy gold bullion. Clearly, then, a rate of exchange which is *favourable* to the foreign buyer of sterling will enable him, *without extra cost to himself*, to pay more sterling for the gold which he requires than he would do if the rate of exchange were *unfavourable* to him. Hence, it may be stated that, as a general rule, the price of gold on the London Market *tends to fall when the foreign exchanges move in favour of this country, and tends to rise when the foreign exchanges move against London*.

The price of gold in London and the sterling exchange rates interact upon each other. If gold rises in price in London and remains stable in terms of other gold currencies, then sterling will depreciate to the extent of the rise in price in London. If this did not occur at once, bankers would find it profitable to undertake gold arbitrage operations, the effect of which would be to bring about the necessary harmony between exchange rates and the price of gold.

When we were on the gold standard the London price of gold was the basis of prices throughout the world, but nowadays there is no direct link between gold and sterling, and, as Paris now offers the

largest free market for gold, the Bank of France's buying and selling prices for gold normally fix the limits to the price which can be charged in London.

Thus, the Bank of France is willing to buy gold at Fcs. 526·24266 per fine ounce. Hence, gold in London can be sent to Paris and sold to the Bank of France at this figure. If the current exchange rates are Fcs. 79·90–79·95, then, allowing 2½d. per ounce for expenses of shipment, every ounce sent to Paris will realise:—

$$\begin{array}{r} \text{£}526\cdot24266 \\ \hline 79\cdot95 \end{array} \text{ less } 2\frac{1}{2}\text{d.} \\ = 131/5\frac{1}{2}\text{d.}$$

This price, 131/5½d., is the French *parity price* of gold (based on a market buying rate of 79·95), and it represents the lowest price which can rule in the London Market. Clearly, if the price offered for gold in London were only 131/4d. it would pay to buy it at this price, ship it to Paris and sell francs against the proceeds. **The parity price varies inversely with the exchange rate and it fixes the lower limit for the London price of gold.**

The upper limit is calculated from the Bank of France's selling price (Fcs. 527·625 per fine ounce), which, converted at 79·90 (the Market's selling rate) is equivalent to 132/1d. Adding the expense of shipping gold to London, we get 132/3½d. as the upper limit to the price of gold when the market rates are 79·90–79·95. It will be seen therefore that the premium to which the London price of gold may rise above the French parity price depends on the spread between the Bank of France's buying and selling rates, and the spread between the market rates of exchange.

Lord King's Law.—This relationship between the price of gold and the exchanges of a country with a depreciated inconvertible currency was observed many years ago and was thus expressed by what is known as Lord King's Law:—

"If a metallic and an inconvertible currency are circulating together, and the market price of bullion exceeds the Mint Price, whilst the foreign exchanges have fallen below the specie point, the paper currency is depreciated, and the difference between the market and the Mint Price of bullion is the measure of that depreciation."

Arithmetically it may be expressed thus:—

$$\begin{array}{r} \text{Prevailing rate on gold centre} \\ \hline \text{Mint Par} \end{array} \quad \begin{array}{r} \text{Mint price of gold} \\ \hline \text{London market price} \end{array}$$

This means that if the usual specie points are inoperative, the rates of exchange between a country having a depreciated currency and a gold standard centre will turn against the former country to the extent representing the premium on gold, as measured in terms of its inconvertible paper (see examples in Chapter XXXI).

Bullion Returns and the Bullion Article.—In view of the great importance to the Money Market and to the country generally of movements in bullion, it is only to be expected that returns of such movements should be frequently published by the Bank of England for the information of all interested. Towards the close of business each day the Bank of England issues a Daily Bullion Return or Bulletin giving particulars of all arrivals or withdrawals of gold during the day, the importance of the figures to the Market being strikingly illustrated by the throng of messengers and representatives of the banks and discount houses who await the appearance of the Return in order to convey its contents immediately to their principals.

The information given by the Bank of England respecting gold movements is of the scantiest kind, and it is not possible to determine the origin of the arrivals or the destination of the withdrawals merely by a perusal of the Daily Bulletin. As a rule, however, this information may be gleaned from the Market, or is determinable from the position of the principal exchanges.

The Daily Return issued by the Bank of England is, of course, concerned only with gold which is received by or withdrawn from the Bank. No mention is made therein of gold which is purchased or sold on the Bullion Market without the intervention of the Bank of England, or of gold purchased by the Bank in the Market on behalf of foreign central banks. Fortunately, however, the deficiency is made up by the Weekly Return of exports and imports of gold coin and bullion issued by the Statistical Department of H.M. Customs and Excise. This Return not only gives the total value of all the gold movements, but specifies also the countries from which gold is received or to which gold is exported.

Naturally, the bullion figures disclosed by the Bank of England are discussed in some detail in the Money Articles of the principal newspapers. As a rule, the City editors are able to state, from information gleaned by them from the Money Market, the destination or source of the gold movements announced by the Bank, and, as far as is possible, they explain the causes underlying those movements.

As, at the time of writing (April, 1934), Britain remains off the gold standard and the Bank of England is free of its obligation to

exchange its notes for gold, the London Bullion Market reports are relatively far less informative than they were before our departure from gold in 1931. Accordingly, the following daily and weekly bullion articles dated 1929 are left for the information of the reader, who is advised to compare them with any more up-to-date reports which may be available to him.

Nowadays, most arrivals and withdrawals of gold reported by the Bank of England are in the form of *bars*, although, before our departure from gold in 1931, the Bank Bullion Return frequently recorded the receipt or withdrawal of *sovereigns*. It will be remembered that under the *Gold Standard Act*, 1925, the Bank was entitled to pay out gold for export at its option in the form either of bars or of sovereigns, and the latter were sometimes preferred by the foreign importers, particularly where the gold was required by a foreign central bank as part of its reserve.

DAILY BULLION ARTICLE.

The Times, 29th FEBRUARY, 1929.

The Bank of England announced yesterday the purchase of £712,300 in BAR GOLD. Since Wednesday last there has been a net influx of £660,323 as shown below:—

ARRIVALS.				WITHDRAWALS.			
			£				£
February 14	..	..	--	February 14--			
				Bars	..	..	35,906
				Sovereigns	..	..	4,000
February 15	..	..	---	February 15--			
				Bars	..	..	8,652
February 16	..	..	---	February 16	..	..	—
February 18	..	..	---	February 18--			
				Bars	..	..	3,419
February 19--				February 19	..	..	—
Bars	..	..	712,300	Influx since Wednesday last			660,323
Total	..	..	£712,300	Total	..	..	£712,300

Efflux for 1928 (according to published movements of gold), £1,321,956; efflux for 1929 to date, £1,987,197.

In the bullion market £923,000 of bar gold was available. This was disposed of at 84s. 10½d. per ounce, a decline of ½d. The Bank of England secured about £710,000, India £80,000, the Straits Settlements £50,000, the home trade £40,000, and the Continental trade £36,000. Gold engagements for the steamer leaving Durban for India on February 25th were closed yesterday, a sum of £464,000 in bar gold having been engaged for shipment by this vessel.

Silver advanced sharply as a result of a strong Chinese demand for the metal. This was understood to be associated with the recent less favourable political reports from China. India was also a buyer at lower prices, and there were only small offerings. The cash price advanced ½d. to 25½d. per ounce, while the forward quotation at 25½d. showed a rise of 3-16d.

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BULLION AND SPECIE.

Imports of gold into Great Britain and Northern Ireland, registered * from midday on February 14th to midday on February 18th, amounted to £8,166, while exports amounted to £8,269. In the same period imports of silver amounted to £4,261 and exports amounted to £70,558.

INDIAN PAPER CURRENCY RESERVE.

	February 15.	February 7.
	Lacs of Rupees	Lacs of Rupees
Note circulation	19,144	18,916
The reserve against it was held in the following form:—		
Silver coin and bullion in India	9,910	9,882
Gold coin and bullion in India	3,221	3,221
Securities (Government of India)	4,327	4,327
Securities (British Government)	786	786
Bills of Exchange	900	700
Total	19,144	18,916

* I.e., by H.M. Customs and Excise.

WEEKLY BULLION ARTICLE AND BULLION LETTER.

The Economist, 2nd FEBRUARY, 1929.

The following statistics of imports and exports of gold for week ended January 31, 1929, are issued by the Statistical Department of H.M. Customs and Excise:—

Imported into Great Britain and Northern Ireland.		Exported from Great Britain and Northern Ireland.	
From—	£	To—	£
Germany	2,000	Norway	137
France	21,946	Poland	3,760
U.S. of America	2,577	Germany	25,830
British West Africa	33,111	Netherlands	33,100
British South Africa	822,137	France	12,731
Other countries	1,573	Switzerland	51,665
		Austria	12,300
		Egypt	13,808
		U.S. of America	2,128,412
		Java	1,150
		Gibraltar	3,000
		Bombay, via other ports	91,369
		Straits Settlements	20,355
Total declared value of imports	£883,344	Total declared value of exports	£2,397,617

GOLD MOVEMENTS

The arrivals and withdrawals of gold during the past week, as announced by the Bank of England, have been as follows:—

1929.	ARRIVALS.	£	1929.	WITHDRAWALS.	£
Jan. 25	Bars bought ..	4,805	Jan. 25	.. ..	—
.. 26	Sovs. from abroad ..	53,000	.. 26	Bars sold ..	24,212
.. 28	.. ..	—	..	Sovs. export ..	17,000
.. 29	Bars bought ..	474,300	.. 28	Bars sold ..	3,451
.. 30	.. ..	—	.. 29	Bars sold ..	827,524
.. 31	.. ..	—	.. 30	Sovs. export ..	3,000
			.. 31	Bars sold ..	3,385
				Sovs. ..	5,000
				Sovs. set aside ..	500,000
Total	.. ..	£532,105	Total	.. ..	£1,383,572

Net withdrawals, £851,467.

Messrs. Samuel Montagu and Co. write on January 30th as follows:—

GOLD

The Bank of England gold reserve against notes amounted to £153,103,414 on the 23rd instant (as compared with £154,171,272 on the previous Wednesday), and represents a decrease of £802,901 since April 29, 1925, when an effective gold standard was resumed. About £817,000 bar gold from South Africa was available in the open market this week. The Bank of England purchased about £475,000, as is shown below, New York £300,000, and India and the trade the balance. There was a net efflux of gold of £394,507 during the week under review.

Following are the balance of trade figures for India, in lacs of rupees, for the month of December, 1928—Imports of merchandise on private account, 1,849; exports, including re-exports, of merchandise on private account, 2,695; net imports of gold, 273; net imports of silver, 25; net imports of currency notes, nil; total visible balance of trade, in favour of India, 552; net balance on remittance of funds, against India, 464.

SILVER

Sellers have been rather reluctant at the lower prices touched during the past week, neither China nor America being disposed to furnish supplies. Although the Indian bazaars have made some re-sales, buying orders from this quarter have predominated, and the market has assumed a steady tone, with subsequent recovery in the quotations. The rates fixed on the 24th instant—viz., 26d. for cash and 26½d. for two months' delivery—were the lowest fixed for some considerable time—for spot since October 29, 1927, and for forward since March 9, 1928. Purchases by the Indian bazaars for near shipment resulted yesterday in the price for cash silver, which had been at a discount since last November, being quoted level with forward at 26½; a premium of ½d. on silver for two months' delivery was, however, re-established to-day.

The following were the United Kingdom imports and exports of silver registered from midday on the 21st instant to midday on the 28th instant:—Imports: France, £20,791; other countries, £230; total, £21,021. Exports: Netherlands, £57,400; Irish Free State, £12,058; British India, £23,580; other countries, £4,577; total, £97,615.

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INDIAN CURRENCY RETURNS (In Lacs of Rupees).

	January 7.	January 15.	January 22.
Notes in circulation	18,910	18,929	18,909
Silver coin and bullion in India .. .	10,047	9,996	9,890
Silver coin and bullion out of India .. .	—	—	—
Gold coin and bullion in India .. .	3,151	3,221	3,221
Gold coin and bullion out of India .. .	—	—	—
Securities (Indian Government) .. .	4,327	4,327	4,327
Securities (British Government) .. .	685	685	771
Bills of exchange	700	700	700

The stock in Shanghai on the 26th instant consisted of about 66,100,000 ounces in sycee, 106,000,000 dollars and 5,160 silver bars, as compared with about 64,300,000 ounces in sycee, 105,000,000 dollars and 2,320 silver bars on the 19th instant.

GOLD AND SILVER PRICES

	Gold— Per Ounce.	Silver—Per Ounce.		Date.	Silver. Cash.
		Cash.	Forward.		
1929.	s. d.	d.	d.		d.
Jan. 25 ..	84 11½	26½	26½	Feb. 9, 1923 ..	30½
„ 26 ..	84 11½	26½	26½	„ 8, 1924 ..	33½
„ 28 ..	84 11½	26½	26½	„ 6, 1925 ..	32½
„ 29 ..	84 11½	26½	26½	„ 5, 1926 ..	30½
„ 30 ..	84 11½	26½	26½	„ 4, 1927 ..	27½
„ 31 ..	84 11½	26½	26½	„ 2, 1928 ..	26½

The inclusion in the Bullion Article of so much detail respecting the trade position and note circulation of India is, of course, striking proof of the importance of that country as a factor in the market. If India's trade position is strongly in her favour, the market can count upon heavy demands for the precious metals for export to that country, and, of course, conversely. Changes in the figures of the Indian currency note returns are important for similar reasons.

Gold “Earmarked” and “Released”.— An interesting feature of the Bank's Daily Bullion Return, which has disappeared now that the Bank no longer sells its gold, was the practice whereby withdrawals of gold were described as “*earmarked*” or “*set aside*”, whilst arrivals were sometimes referred to as “*released*”. Items “*earmarked*” represented withdrawals of sovereigns which were not actually moved away from the Bank, but which were set aside on account of some foreign institution or institutions. This, as a rule, was a central bank which, instead of actually importing gold in order to maintain its reserves, purchased the metal from the Bank and arranged with the Bank to hold the gold on its account. If gold thus set aside was

afterwards exported, no further record appeared in the Bank's Bullion Return (though it appeared, of course, in the Return of Exports), but if the gold again returned to the ownership of the Bank of England, it was described in the Daily Bulletin as "released".

An important instance of such "earmarking" happened in December, 1932, when the Bank reported the withdrawal of over £19,000,000 of gold. This withdrawal was made on account of the Government for the credit of the U.S. Government and represented the payment due in respect of our War Debt. It was obviously impossible to export the whole quantity at once; instead, the greater part was earmarked and withdrawn as shipments were made. This operation was, of course, an abnormal one, for nowadays the Bank no longer sells its own gold to foreign banks. Nevertheless, it still undertakes purchases of gold in the Market on their behalf, and holds the bullion at their disposal until they decide either to sell it or to have it shipped abroad. Gold so held by the Bank of England is regarded merely as being held in safe custody. It is not included in the published total of the Bank's Reserve; and the right of its owners to withdraw it is not affected by changes in the regulations governing the sale of gold by the Bank.

The London Silver Market.—The price of silver bullion is fixed at 1.45 p.m. on each business day in very much the same way as is the price of gold. Slightly before the time stated, the bullion brokers meet in conference to consider the conditions of supply and demand and to fix the market prices for silver, the prices so fixed being immediately cabled to the world's most important monetary centres.

Two prices are fixed by the market for silver bullion:—

- (a) The "*Spot*" or "*Ready*" price for silver which must be delivered by the seller within one week from the date of the sale. Most of the metal is received from the foreign mining countries in weekly shipments and thus, in respect of many of the sales made before the metal has actually reached the market, the silver is sold "*to arrive*" in not less than one week.
- (b) The "*forward*" price for deliveries which must be made by the seller two months after the date of purchase.

The prices in both cases are quoted in pence per ounce of *standard** silver, .925 fine, and *not* per ounce of *fine* metal as in the case of gold. As a rule, the metal comes on the market in the form of bars of standard fineness, weighing anything from 900 to 1,300 ounces.

* I.e., pre-1920 standard—see Chapter XXV.

The price for forward silver is ordinarily quoted at a premium or discount on the "spot" price, the margin between the two varying according to the anticipations of the market as to the likely state of demand and supply on the future date when the forward contract must be completed. Forward contracts in silver are, of course, similar to all other types of forward contract. The price is fixed at the time the contract is made, but the silver is not actually delivered and no cash passes until the agreed future date for forward delivery.

The market for silver is peculiar in several respects. In the first place, the volume of forward business is much greater than the volume of spot business, and the forward quotation is consequently by far the more important. There are two main reasons for this. First, refiners of silver ore are eager to take advantage of the forward facilities in order to relieve themselves of any risk of loss through fluctuations in the price of the metal. Secondly, the market is very much dominated by the demand for silver from India, China and other Eastern countries, where the metal is not only used as the principal form of currency, but is also widely in demand for ornamental purposes, particularly in the Indian Bazaar trade. This demand is concentrated mainly in the hands of the Eastern exchange banks, who are very large buyers of forward silver, more especially because, by buying forward, they ensure that they have the necessary silver available to meet Eastern silver bills at maturity.

Another feature of the London Silver Market is that a considerable proportion of the silver sold in the Market is never actually received there. Much of it is sent direct from the producing country to the purchasing centre, as, for example, from the silver mines of Western U.S.A. and Canada to China and India.

The London Silver Article.—Although the Silver Market in London is necessarily overshadowed by the world-wide importance of the Gold Bullion Market, the Daily and Weekly Reports of conditions and prices in the Silver Bullion Market are of considerable interest to bankers, financiers and Eastern traders. The Bank of England itself is not greatly concerned with the position or movements of silver, and no official Return is issued by that institution corresponding to the Daily Gold Bulletin.

The reports of conditions on the Silver Market are issued for the guidance of the Money Market by the old-established firms of dealers previously referred to, and a summary of the conditions on the Market is given in the daily and weekly financial papers. A specimen of the Silver Article from *The Economist* appears on page 365.

CHAPTER XVII

THE BANK RATE AND THE MONEY MARKET: THE CONTROL OF CREDIT AND OF THE FOREIGN EXCHANGES

THE Bank Rate is the official advertised minimum rate at which the Bank of England will discount approved * (i.e., first-class) bills of exchange for members of the Money Market. For its customers other than members of the Market, the Bank may discount at slightly lower rates. The Bank Rate is fixed by the Bank Court of Directors at their meeting on Thursday in each week, and its great importance lies in the fact that all other rates in the Money Market and in the country are regulated by it.

There are several rates of interest in the Money Market which, while all are more or less dependent upon each other, are all dependent on the Bank Rate.

Market Rates of Discount are the rates charged by brokers, discount houses and bankers other than the Bank of England for discounting bills of exchange. Different market rates are quoted for bills having varying periods to run before maturity, while higher rates are quoted for *trade* bills than for *bank* bills. The term "market rate", sometimes called the "*private*" rate, is commonly used to mean the rate for three months bank bills. This rate is nearly always lower than the Bank of England rate.

Bankers' Deposit Rate is the rate of interest allowed by bankers on money placed with them on deposit by their customers, and is usually fixed at 2 % below Bank Rate, with a minimum of $\frac{1}{2}$ %.

Brokers' Deposit Rate is the rate allowed by brokers and discount houses on money lodged with them repayable at call or short notice, and is usually slightly higher than Bankers' Deposit Rate.

Bankers' Call Rate or *Day to Day Rate*, and *Bankers' Short Rate* or *Seven-Day Rate*, are the rates charged by bankers for lending money to bill brokers and other members of the Money Market, repayable on demand or at short notice.

* An "approved" bill must have two good *English* names, one of which must be that of the acceptor.

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Treasury Bill Rate is the rate of discount at which Treasury bills are dealt in on the Market.

The following table adapted from *The Economist* indicates the method of quoting the various rates on the London Market:—

LONDON RATES.

	May 10, 1934.	May 11, 1934.	May 12, 1934.	May 14, 1934.	May 15, 1934.	May 16, 1934.	May 17, 1934.
Bank rate (changed from 2½% June 30, 1932) ..	3%	3%	3%	3%	3%	3%	3%
Market rates of discount—							
60 days' bankers' drafts ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
3 months' do. ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
4 months' do. ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
6 months' do. ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
Discount (Treasury Bills)—							
2 months' ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
3 months' ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
Loans—Day-to-day ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
Short ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
Deposit allowances: Bank ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
Discount houses at call ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11
At notice ..	1-11	1-11	1-11	1-11	1-11	1-11	1-11

Most of the “*market money*”, which forms “*the short loan fund of the London Money Market*”, is derived from the funds held by bankers on behalf of customers. These funds consist partly of deposit balances on which low interest is paid and partly of current account balances on which no interest is paid. Since these deposits are repayable on demand or at short notice, the banks must take steps to provide a reserve for possible withdrawals, and this they do by setting aside a portion of their funds to be held in cash or at the Bank of England. The remainder they seek to employ as remuneratively as possible, but their obligation to repay at very short notice forces them to have careful regard to the liquidity of their investments. Hence they use part of their disposable funds in making loans to customers, part for investment in Government and other securities, and the balance for use in discounting bills or in making short-term advances to members of the London Money Market. This fluctuating balance used on the Money Market constitutes the bulk of the “*Short Loan Fund*” of the Market.

Now, the price at which bankers will lend “*money at call or short notice*” is naturally dependent on the price at which they are able to borrow from their customers “*on deposit*”, and as “*Deposit Rate*” is by custom based on Bank Rate, a rise in the Bank Rate causes a rise in the Call and Seven-Day Rates, at which the bankers lend to the brokers. The brokers, having to pay more for the money they

borrow, must charge higher rates for discounting bills, and the result is that Market Rates also go up. The same set of forces operates in the other direction when the Bank Rate is lowered: ultimately Market Rates are brought down.

It is thus true to say that the Bank's rate of discount determines the level of interest rates throughout the country. But movements in interest rates seriously disturb commercial contracts, impart an element of uncertainty to business transactions, and, in many cases, cause hardship and loss by disturbing the relationship between debtor and creditor. For these reasons, the Bank authorities change the official rate only after most careful deliberation, and only when all other means at their disposal have failed to control the money machine.

The Immediate and Ultimate Objects of Raising the Bank Rate.—

In the discussion of the purchasing power parity theory of the exchanges it was explained that the rate of exchange prevailing in the Market at any particular time is determined by demand and supply, whereas in the long run, the rate is determined by the relative purchasing powers of the two currencies concerned. We have seen, too, that the maintenance of the gold standard implies both temporary and consistent equilibrium between the nation's total debits and credits. Consequently, when the Bank of England decides that it is necessary to raise its rate of discount in order to prevent an outflow of gold (or when we are off the gold standard, to counteract a sagging tendency of sterling rates), it has two objects in view.

Its *immediate object* is so to influence the relationship between the demand for and the supply of sterling in the gold-attracting centres that a better equilibrium between debits and credits arising for settlement is at once achieved. In other words, it endeavours to turn the rates of exchange in favour of London so as to prevent an outflow of resources, in the form of gold or of floating capital, and, if possible to induce an immediate inflow of such resources.

This first object is achieved mainly because the higher rate of interest increases foreign short-term investments on the London Market (either by the purchase of London bills or otherwise, as explained in an earlier chapter), while, at the same time, it lessens the attractiveness of foreign centres for the investment of funds from this country. The investment of foreign funds in London leads to a demand for sterling exchange, while the decrease in the investment of British funds abroad results in a falling off in the London demand for foreign currencies. The market rates of exchange move in favour of London and the gold outflow is stopped or prevented. The inflow

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of short-term balances remedies the current deficit in the nation's international position, and brings about conditions of equilibrium between the total debits and credits in process of being set off.

If this first effect of a rise in Bank Rate were the only effect, it would leave unchanged the basic conditions that had caused the outflow of gold which necessitated the alteration of the Bank Rate, so that, in time, those conditions would again influence the exchanges adversely and the outflow of gold would be resumed. Actually, however, a rise in Bank Rate has other effects on the credit and price structure of the country, and it is these *ultimate* effects which modify the conditions responsible for the gold outflow. Thus the *ultimate object* of a rise in Bank Rate is the more fundamental. The Bank aims not merely at bringing about a change in the existing conditions of demand and supply on the Foreign Exchange Market: it seeks also to bring about conditions of more permanent equilibrium by altering the *bases* of the rates of exchange, i.e., modifying the purchasing power parities between sterling and other currencies, thereby bringing about a change in the direction of trade and consequently modifying the ultimate balance of international payments.

The Bank is able to achieve these objects because the rise in the rate of interest forces up the internal purchasing power of sterling. Higher rates of interest stimulate saving and discourage borrowing; bankers' deposits increase and their loans contract; *credit facilities generally are restricted*, with the result that the supply of money relative to the quantity of exchangeable goods tends to be reduced. Consequently, the price level falls, i.e., the internal value of sterling rises.

The fall in the internal price level has important reactions on the flow of goods. The country becomes a relatively better market in which to buy but a relatively poorer market in which to sell. Exports are therefore encouraged while imports are discouraged. The balance of trade is modified to a position of equilibrium. The increase in exports adds to the foreign demand for sterling, whereas the fall in imports lessens the supply of sterling in other centres. Thus the *external* value of sterling tends to rise along with its *internal* value.

Naturally, the change in the internal value of sterling will take some little time to become effective, and, in the meantime, the inflow of funds for investment will have raised the external value of sterling. Hence the ultimate effect of a rise in the Bank Rate on the price structure is not so much to raise the exchange value of sterling still further, as to maintain the higher value which has already been

established and to place that higher value on a more permanent and more stable basis.

The Importance of Ensuring the Effectiveness of the Bank Rate.—

If the Bank of England's credit policy is to be successful it is essential that movements in its rate should be followed by corresponding movements in market rates of discount and interest. The first-class London bills purchased by foreign bankers as investments for their liquid funds are discountable at *market* rates, and not at Bank Rate, so that the foreign demand for such bills will not be increased unless a rise in the Bank Rate is followed by a rise in the market rate. Secondly, foreign balances will not be attracted for investment in this country unless the rise in the Bank Rate induces a rise in the rates of interest offered on the Market for deposits of bankers' funds. Again, general credit conditions throughout the country will not be affected unless the rates of interest charged by lenders generally follow the lead set by the Bank of England, for it is obvious that no borrowers would resort to the Bank and pay its higher rate if there were sufficient loanable funds available elsewhere at lower rates.

Generally speaking, the influence of a rise in Bank Rate is effective only when money conditions are fairly stringent. If there are plentiful supplies of money on the Market, the competition of brokers and bankers to find employment for their funds keeps market rates down in spite of a rise in Bank Rate, because they are anxious to secure any return rather than no return at all. The Bank must then adopt other means to obtain control of the Money Market, and it does this by acquiring some of the surplus money itself, until the excess is reduced. Then it often happens that bill brokers and other market borrowers are compelled to fall back on the Bank for funds, i.e., the Market is forced "into the Bank", and so the Bank is enabled to fix its own price for the accommodation.

The Bank of England's Open Market Policy.—When the Bank of England operates directly in the Money Market in order to modify credit conditions, it is said to be resorting to what is known as its "open market policy". Such market operations by the Bank usually take the form of purchases or sales of Government or other securities (usually Treasury bills or other first-class bills) in return for cash, and are at once reflected in the important items of "Other Deposits" and of either "Government Securities" or "Securities" included in its weekly Return. A sale of securities or bills by the Bank to the Market is reflected in a reduction in the amount either of "Government Securities" or "Securities" and in the total of "Bankers' Deposits",

while the proportion of the Bank Reserve is increased. On the other hand, when the Bank buys securities or bills, "Bank Deposits" and either "Government Securities" or "Securities" are increased, while the Reserve proportion falls.

On occasion, the Bank's intervention may assume a less tangible form, particularly when it desires to forestall or prevent developments which may have undesirable consequences, either on the credit situation or on the foreign exchanges. Thus it may take steps to prevent an undue expansion of credit on the occasion of heavy Government interest payments by fortifying its portfolio of first-class bills maturing on or about the same date. The payment of such bills depletes the cash resources of the other banks which would otherwise have been increased by the dividend payments. In the same category, we may place the action of the Bank in taking the Market into its confidence and thus securing its co-operation to prevent the tendency of market rates to sag or to harden more than appears to be desirable.

Notable instances of such intervention by the Bank occurred during 1928 and 1929. In May-June, 1928, when large quantities of gold were entering the country, the Bank took active steps to prevent an expansion of credit by selling considerable amounts of securities on the London Market. Thus the Bank drained any surplus supplies of cash from the Market, prevented an increase in the cash resources of the other banks, and checked their power to increase their loans. The gold which had flowed freely into the Bank's coffers was thus denied its credit-creating power and its possible interference with the internal price level and the external exchanges. At the same time, the maintenance of market rates kept up the attractiveness of London for the investment of foreign balances, and thus the inflow of gold was larger than it might otherwise have been.

In 1929 (and again in 1930) conditions veered round the other way, market supplies of credit being much reduced by the unusually large exports of gold to the United States and France. In order to assist the Market, the Bank of England bought considerable quantities of securities, thus re-creating part at least of the credit which had disappeared with the exports of gold.

Principles Underlying the Bank's Policy.—The general object of the Bank's open market operations on these, as on other similar occasions, is to minimise fluctuations and ensure much more stable credit conditions than would otherwise prevail. The Bank aims at smoothing out credit fluctuations, offsetting or minimising the effect of gold shipments, and at obviating the widespread consequences and

disturbance which follow changes in its official rate of discount. By its open market operations the Bank secures a much finer control of credit than by arbitrarily raising or lowering its discount rate. Hence, while Bank Rate still remains the basis of the other rates on the Market, its movements are far less frequent and violent than they used to be.

In general terms, the Bank endeavours to control the currency and credit mechanism in the interests of the nation as a whole. Its constant aim is to ensure that the country's external exchanges, and also the internal credit and monetary position, shall be as stable as possible. Stability of the foreign exchanges is, as we have seen, a most important requirement for the even flow of international trade, while steadiness of the internal currency and of the credit mechanism is necessary to prevent the disturbance of business relationships.

Now steadiness of the internal currency and credit mechanism implies that the nation shall have sufficient circulating currency and adequate supplies of credit to satisfy its current needs. That steadiness is indicated mainly by the published index numbers of wholesale prices and can be achieved by the Bank by virtue of its possession of those essentials of *central bank equipment*,—the monopoly of the right of note issue, the custody of the nation's gold reserves, and the position of banker to the State and to all our other banks.

The advantage of the control of the note issue and of the custody of the nation's gold reserves is rather negative than otherwise. The Bank's powers in these respects are strictly delimited by law, but, clearly, any outside control of the note issue or of the gold reserves would be incompatible with the Bank's position as arbiter of the national credit. Much greater power attaches to the position of the Bank as banker to the State and to the other banks. The former implies intimate co-operation between the Bank and the Treasury, with the object not only of regulating monetary conditions for the benefit of the nation generally, but also of regulating them with an eye to the Government's current financial requirements. Nowadays, State financial operations connected with conversion schemes, payments of dividends, tax receipts, and temporary borrowings to cover revenue deficits, are of such magnitude that considerable dislocation would ensue if this close co-operation were not maintained.

Probably the most important factor ensuring the Bank's control of credit is its position as holder of the cash reserves of all the other banks in the country, since it is by bringing about changes in the total of these reserves that the Bank is able to secure control of the

floating supplies of credit on the London Money Market. In ordinary circumstances, it does this by the exercise of its open market policy. When credit shows signs of too great an expansion, the Bank attracts some of the floating supply from the Market to itself; conversely, when there are indications that credit is inadequate to the need of the moment, the Bank remedies the position by increasing the quantity available. Thus its actions result in a temporary or day-to-day adjustment of the credit position.

Since 1932, the Bank of England has been able to use an additional method of achieving stability of the exchanges, by virtue of the existence of the Exchange Equalisation Account, which, as is explained in Chapter XX, is an arrangement under which the Bank is supplied by the Government with extensive resources for use in buying and selling foreign exchange with a view to maintaining the sterling rates of exchange on the leading world centres. Whilst this arrangement continues, the Bank of England is, of course, almost entirely freed from the necessity of resorting to changes in its rate of discount or to open market operations *in order to control the foreign exchanges*, but as the expedient is mainly an extraordinary one, it may be assumed that the Bank of England will, in time, revert to the methods described in this chapter. Actually, at the time of writing, the Bank uses its ordinary methods mainly to control internal monetary conditions, but those conditions are, of course, so closely bound up with the exchanges that the Exchange Account must be operated with close regard to the Bank's domestic policy.

Difficulties of the Bank's Position.—The aim of the Bank's policy is to preserve such monetary conditions as are considered to be most conducive to the general welfare of the country. When Great Britain is on the gold standard this aim resolves itself into two main objectives: the maintenance of stability of internal prices, and the maintenance of stability of the exchanges with other gold standard countries. But there are occasions when these two objectives may conflict.

Let us assume, for example, that, whilst we are on the gold standard, the exchange rates move against this country and that there is, in consequence, an outflow of gold from London. In such circumstances, the Bank of England may decide that the tendency of gold to move out of the country is an indication that our internal prices are too high, in which case the Bank will in all probability take steps to reduce the volume of credit (e.g., by raising the Bank Rate and/or by selling securities on the Market), and so induce a fall in the price level and an adjustment of our balance of payments. On the other hand,

the Bank may decide that a fall in internal prices is unwarranted and undesirable, and may consequently take steps to offset the gold exports by open market operations, so preventing a fall in prices. In the former case, the Bank achieves exchange stability at the expense of price stability; in the latter case, the Bank maintains stable prices at the cost of an artificially supported exchange position. Such action may be justifiable as a remedy for *temporary* disequilibrium, but if it is extended further and is used to support an artificial overvaluation of the currency, as it was in this country between 1925 and 1931, nothing but harm can result. Hence, the ability of the Bank to maintain stable credit conditions whilst this country was on the gold standard was conditional on the maintenance of reasonably stable conditions in other countries which were on the gold standard. Even now, though we are free from our golden shackles, the Bank's policy must necessarily be influenced by credit conditions in other important countries, and these may on occasion complicate its task of stabilising conditions at home.

A second difficulty under which the Bank labours is due to the fact that it has not a *monopolistic* control of credit. We have seen that the enormous growth of the joint stock banks in this country and the great expansion of their deposits have made it essential that the Bank of England should be able to rely upon the co-operation of these institutions in implementing its credit policy. In the absence of such co-operation there would be considerable danger of a clash of interests. But although the large banks are perhaps strong enough to rebel against the lead of the Bank of England, it is unthinkable that any such action is likely, though, as was pointed out by the Macmillan Committee, there is a real danger that the banks generally may work at cross-purposes with the Bank of England through ignorance of its exact aims, and for this reason the Committee suggested a much closer contact between the central bank and the other institutions (see page 382).

A far more potent factor which might, if uncontrolled, undermine the ascendancy of the Bank of England in the Money Market is that arising from the heavy short-term borrowings of the Government. These borrowings, however, are in practice very carefully managed by the Treasury, acting in conjunction with the Bank of England, in such a manner that, instead of *competing* with the operations of the Bank, borrowing operations by the Government are so arranged as to *strengthen* the Bank of England's powers.

Short-Term Borrowing by the Government.—The Government's

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short-term borrowings from the Money Market are made chiefly by the issue of *Treasury Bills* and by taking *Ways and Means Advances* from the Bank of England. The latter, as the name implies, are current account loans made by the Bank in its capacity as banker to the State, and they appear in the Bank Return as Government Securities. Treasury bills, however, are of considerable interest, since they are issued not only to the Bank but also to the public through the Bank.

In effect, although not in form, a Treasury bill is the same as a bill of exchange drawn on the Government, and is made payable, on a fixed future date, at the Bank of England out of the Consolidated Fund of the United Kingdom. Moreover, a Treasury bill is similar to its more prosaic prototype in the fact that it is issued and subsequently sold at a discount from its face value, but it is unlike many bills of exchange in the fact that it is always backed by the finest possible security—British National Credit—and is thus a short-term investment of the utmost liquidity and value.

Originally used as a mere temporary expedient to cover revenue deficiencies, Treasury bills have become not only an integral and very substantial part of the British floating debt, but also a factor of the greatest importance in the nation's financial machine as centralised on the London Money Market.

How Treasury Bills are Issued.—The procedure adopted by the Government in issuing Treasury bills has varied from time to time, although they are invariably made available through the Bank of England, acting under mandate from the Treasury. At times, the bills have been sold by the Bank at a fixed, advertised price; at other times, they have been sold by tender, while, on other occasions (including the period from April, 1921, up to the present time), a combination of both these methods has been adopted. The system now existent is as follows:—

On Thursday in each week the Bank of England announces in the *London Gazette* that it is prepared to receive tenders up to one o'clock on the following Friday for Treasury bills, in denominations of £5,000 and £10,000, up to a stated maximum amount, which varies according to the needs of the Exchequer. All tenders must be made through the intermediary of a bank, discount house or bill broker, and the tender must state how much per £100 the person tendering is prepared to offer for a specified quantity of Treasury bills. No tender for a smaller amount than £50,000 is accepted. Occasionally, bills for six and even twelve months have been issued, but nowadays the whole

amount allotted is in bills of three months, the person tendering having the option of indicating from which day of the following week he wishes to have the bills dated, thereby fixing their date of maturity and of repayment. Separate tenders must be submitted if bills of different maturity are required, since the rate of discount may vary to the extent of a few pence according to the repayment date chosen.

Early in the afternoon the successful applicants are notified, and if the lowest price accepted is not roughly what the Market expected, market rates may be abruptly disturbed and brought into approximate conformity with the allotment rate. As soon as the allotments are announced, forward dealings in the new bills usually begin forthwith, and, until the next series of bills are allotted, the bills issued each week are known as "hot" Treasury bills, i.e., the bills outstanding which have the longest time to run before they reach maturity.

In addition to the amounts allotted by tender in this way, the Bank sometimes indicates its willingness to supply "Additional Treasury Bills" at a fixed rate, known in market jargon as the "*tap rate*", because the bills are regarded as being "on tap", i.e., available as and when required. Bills on tap are slightly dearer than those allotted by tender during the previous week, since the tap rate applied throughout each week is fixed slightly below the average rate at which bills were allotted in response to tenders received on the preceding Friday. Additional bills also differ from those issued by tender in the fact that the person tendering is given no option respecting their date: they are invariably dated from the day after receipt of the application.

The Effect of the Issue of Treasury Bills on the London Money Market.—Since the weekly offerings of Treasury bills are varied according to the need of the Government for money, it follows that the total amount outstanding on the Market must also vary from time to time, but an examination of the particulars of offerings and allotments over a period indicates that, on average, the amount outstanding at the present time amounts to the huge total of about £450-500 millions,* most of which is held by members of the London Money Market.

The first point which strikes one on considering these figures is that the issue of Treasury bills must have made good the post-war deficiency in first-class bills, required by the Money Market—and especially the banks—for short-period investment. The second point

* Additional to the £350 millions issued in connection with the Exchange Equalisation Account.

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is that the availability of such vast supplies of these bills, backed by the finest security, must necessarily influence the rates of discount at which other bills are bought and sold. Indeed, full use of this fact has been made by the Bank of England and the Treasury, working in close co-operation, in order to manipulate credit conditions on the Market.

If, for instance, the authorities desire for any reason to restrict credit and force up the rates of discount, a larger amount in Treasury bills is offered and allotted than is automatically returned to the Market from the maturing Treasury bills. Thus market funds are reduced and discount rates harden.

On the other hand, if the authorities wish to relieve a prevailing stringency and bring existing rates down, they offer for sale or tender a smaller amount in Treasury bills than the total sum to be received by the Market from impending maturities, with the result that market funds increase and rates tend to ease. Until conditions veer the other way, and the full quota of Treasury bills is issued, the Government finances itself, if necessary, by obtaining Ways and Means Advances from the Bank of England.

Needless to say, all such operations are carried out by the Bank and the Treasury in close collaboration, and the issue of Treasury bills has, in fact, now become an important part of the Bank of England's open market operations.

Clearly, the issue of Treasury bills is a method of Government finance which has the combined advantages of economy, flexibility and adaptability. It enables the Government of the day to borrow precisely such sums as it requires to meet current needs on the best possible terms, since competitive bidding for such bills as are made available each week ensures that the rate of interest paid by the Government is kept to a minimum. At the same time, the control of the issue by the Bank of England in consultation with the Treasury, not only gives great flexibility to monetary conditions in the Market, but also ensures that those conditions can be modified as is considered necessary by those responsible for the nation's currency and credit machinery.

Criticism of the Bank's Policy.—The Bank of England will not, of course, maintain a high rate of discount longer than is, in its opinion, absolutely necessary. High rates of interest, by increasing the cost of liquid capital, necessarily have a depressing and restrictive effect on industrial and commercial activity, and would seriously diminish production if continued too long.

Unfortunately, there is no absolute basis for determining when a relatively high Bank Rate has outgrown its utility and has become detrimental rather than beneficial. For this reason, the Bank's action in imposing or maintaining a high rate, and in otherwise influencing credit conditions, is frequently the subject of much criticism. In particular, its credit policy immediately before our return to the gold standard of 1925 and in the years following was widely attacked on a number of grounds. Mr. McKenna went so far as to attribute the industrial depression and the severe unemployment in this country from 1923 onwards to the too stringent control of credit exercised by the Bank, pointing out that trade and employment would have been stimulated if greater accommodation had been made available on non-inflationist lines, as was done in the United States. Other experts were equally critical, while most violent attacks on the Bank's policy came from certain business and industrial associations, which assigned to that policy much of the blame for the difficulties which trade and industry in this country had to face in the years after the War.

The Position of the Bill Brokers.—The method of protecting the Bank's Reserve described above makes the bill brokers' position particularly difficult. As dealers in money, lending out capital day by day for short or long periods, fluctuations in the rates at which they can borrow or lend are to them of prime importance. In normal times, when Bank Rate is low, a broker may largely increase his commitments in the belief that the low rate will continue. Suddenly an advance in the rate is announced, his estimated profit disappears, and he may be confronted by a loss. But that is not all. The manœuvres of the Bank to obtain control of the Market also cause him hardship. If funds become scarce as a result of the Bank's borrowings or sales of securities, the other banks on whom the broker relies for accommodation call in their loans, and compel him to obtain funds elsewhere, usually at a higher rate of interest.

If the stringency continues, the brokers are compelled in the end to resort to the Bank, which in such circumstances is always willing to lend, *but on its own terms*. This means that the Bank charges the broker $\frac{1}{2}$ % over Bank Rate, and will not lend for less than a full week. Now the broker works to a very fine margin of profit and the success of his business depends very largely—if not entirely—on his aptitude in anticipating the future course of market rates. Consequently, such changes as we have described entirely upset his calculations as well as disturb his arrangements, and at best his margin of profit, which is always a low one, is bound to disappear.

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Reforms Recommended by the Macmillan Committee.—The Macmillan Committee on Banking and Currency, in its Report dated 1931, made numerous suggestions in regard to the Bank of England. Dealing with the Bank's open market policy, for instance, the Committee expressed the opinion that the success which in the past has attended the Bank's open market operations was in itself a justification for their development, but that the Bank's position could be strengthened if it were afforded more detailed information respecting the nature and extent of the cash holdings and deposits of the joint stock banks, and if there were closer collaboration between the Bank and the joint stock institutions.

In this connection the Committee pointed out that the published figures of the clearing banks show a reserve of about 10·5 % of their deposits, comprising 6 % in cash and 4·5 % in balances with the Bank of England. But this latter figure is higher than is actually the case from day to day, for the averages are not daily averages but relate to particular days, when the reserves are inflated by "window dressing". The Committee recommended, therefore, that the process of window dressing should be abandoned and that the London clearing banks should keep a daily average of cash, in bank notes and balances with the Bank of England, of not less than 10 % of their deposits. This would involve their keeping larger reserves.

It was considered, too, that banks other than the clearing banks should increase their liquid reserves to a proportion to be determined in each case after consultation with the Bank of England. The main object of these larger reserves would be to provide the central bank with adequate resources with which to manage the monetary system. With the same object, the Committee further suggested that the Bank of England should consider an appreciable increase in the amount of its capital.

The Committee considered that if, following frequent and regular meetings with the Bank of England, the banks would from time to time accept the Bank of England's advice as to the average figure at which to keep their reserves, it was possible that the relaxation or tightening up of this figure could be made an important part of the Bank's machinery for the regulation of credit and that it could usefully replace some open market operations, particularly if the joint stock banks' deposit rate were made more elastic. But, in the Committee's opinion, these arrangements could be successful only if the joint stock banks were taken into the Bank's confidence and plainly informed of its current credit policy.

Dealing with the question of the resources of the Bank of England, the Committee pointed out that before the War, Britain's liquid international assets consisted mainly of the Bank of England's gold and of sterling acceptances on foreign account. These were at least equal to and sometimes in excess of our short-term international liabilities. In recent years, however, the vast business in international deposit banking conducted by London had caused her liabilities in respect of short-term bills and deposits held on foreign account to exceed greatly her claims in respect of acceptances. At the same time, there was evidence that London had been undertaking a larger volume of long-term financing than was justified by the surplus which we had available for long-term overseas investment, with the result that we had been financing long-term foreign loans by short-period borrowing in the form of precarious foreign deposits, which could be retained in London only at the cost of high rates of interest. In brief, our position had become much less liquid.

The Committee expressed the opinion, therefore, that the Bank of England's liquid assets should be substantially increased at the first opportunity. Bank Rate should be used sparingly when the object was merely to balance moderate changes in the short-term position by attracting foreign funds. It should be rightly used to contract credit either at home or abroad.

Temporary contingencies, said the Committee, would often be better met by the Bank's relinquishing its own liquid assets. For this reason, fluctuations in the volume of assets should be allowed to a greater extent than in the past. Thus the Bank's gold reserves should be allowed to fluctuate between, say, £175,000,000 and £100,000,000, and they should be supplemented by liquid resources up to £50,000,000 held in foreign centres and with the Bank for International Settlements.

It was considered that the stability of our position would be strengthened if the Bank of England were kept informed of the extent of our short-term indebtedness on foreign account, and to this end it was recommended that details should regularly be compiled by the Bank, from information supplied by the various financial institutions, showing the total of short-term deposits held on foreign account and the total of our outstanding liabilities on account of acceptances.

CHAPTER XVIII

THE SILVER EXCHANGES: THE GOLD EXCHANGE STANDARD: THE INDIAN EXCHANGE

WE have seen that the numerical basis, or the starting-point, of the rates of exchange between any two gold standard countries is the Mint Par of Exchange, calculated by comparing the weight of pure gold contained in the respective monetary units. Such a parity can, of course, be calculated between any two silver standard countries. We can determine the weight and fineness of the silver contained in the respective coins, and calculate a theoretical basis for the exchange of one currency for another. But any parities so determined would be of little practical importance, because only a comparatively small amount of trade and exchange takes place directly between the silver countries. Most of their international business is transacted with the gold standard countries, and the question therefore arises: What constitutes the basis of the rates of exchange between a silver standard centre, such as the busy port of Hong Kong, and a centre such as London or New York, where silver is only a commodity, whose price fluctuates from day to day, and where all payments, internal or external, are, in ordinary circumstances, based on payment in gold?

The London-Hong Kong Exchange as an Example.—The currency of Hong Kong consists mainly of silver Hong Kong dollars (minted at the Royal mints in London, Bombay, and Calcutta) of 416 grains (900 fine), and notes, issued by three Eastern banks, all of which are convertible into dollars. The actual rates of exchange are quoted on the basis of payment in these notes, but, as these are convertible into silver, we can say that the exchange is based on the silver dollar.

A merchant in Hong Kong who sends goods to England will expect to receive payment in silver dollars or in paper currency exchangeable into silver, whereas the English merchant will calculate what he owes on the basis of pounds sterling. We have therefore to investigate the basis upon which the rates of exchange between this

country and Hong Kong are calculated; in other words, we must find an equitable method of exchanging a currency based on the gold sovereign * into a currency based on the silver dollar.

It is manifestly impossible to establish a Mint Par between a gold coin and a silver coin, because we have no fixed relationship between the two metals upon which to work. For instance, if gold to-day happens to be fifteen times as valuable as silver, we cannot proceed to work out on that basis the relative values of our sovereign and the Hong Kong dollar, because to-morrow the value ratio of silver to gold may have fallen to $15\frac{1}{2}$ or 16. But, it may be asked, is not silver also a legal tender in this country, and do not twenty shillings equal one sovereign? Why not therefore establish a Mint Par between the Hong Kong dollar and our shilling, which is one-twentieth of a sovereign, and use that relation as a basis of the rates of exchange?

A moment's consideration will reveal the speciousness of this suggestion. Our silver shilling is not a standard coin, but a token coin. Its face value exceeds the value of its silver content and that value is maintained because, by law, the shilling is made to represent one-twentieth of the standard, the pound sterling. Furthermore, it must be noted that shillings, and other silver token coins, are not freely minted. The coinage of silver in this country is a monopoly of the Government, which makes a profit on its issue. A holder of silver bullion who wishes to turn it into sterling cannot take it to the Mint and demand that it shall be converted into coin at the rate of five shillings and sixpence per ounce (the rate at which our silver currency is coined). He can convert it into sterling only by selling it on the Bullion Market at the current market price, and, as this is far lower than the rate at which silver is made into coin, no exporter in this country would accept silver bullion at the mint rate in payment for his goods.

It is not possible, therefore, to establish a par between the standard coin of a silver standard country and the English shilling. The only way in which a relation can be established between the standard coin of a silver standard country and sterling is on the basis of the value of the silver content of that standard coin calculated at the current price for silver in the Bullion Market. If there is a large supply of silver on the Market, coincident with a weak demand for it, the price of silver will fall; a strong demand coupled with a short supply will

* For purposes of the following explanation, it is assumed that Britain is still on the gold standard and that the sovereign is the basis of the English currency.

cause the price to rise. And every such fluctuation will affect the value in terms of sterling of a silver standard coin; as, for example, the Hong Kong dollar.

The Rate of Exchange between a Silver and a Gold Currency.—

The rate of exchange between a silver and a gold currency will be affected, in the same way as are the prices of remittances between two gold standard countries, by the conditions of demand and supply, which, in turn, are influenced by the usual causes of fluctuations already noted.

But as silver will always be taken in payment in a silver standard country, a person who has a debt to pay in such a country will not pay more for a bank draft than it would cost him to buy silver at the current market price and to forward it to the silver-using centre.

Hence, if I have bought goods from Hong Kong valued at \$10,000, I will not pay more for a bank draft entitling my creditor to that amount than it would cost me to obtain from London or elsewhere at the prevailing market price that quantity of silver bullion which, when forwarded to my creditors in the East, will exchange for \$10,000.

On the other hand, an Eastern exporter who is entitled to so much sterling will not accept fewer dollars in settlement of his debt than he could obtain by utilising the sterling at his disposal in buying silver on the London Market or elsewhere and shipping it home. Likewise, an Eastern importer will not pay more for a remittance to London than it would cost him to buy and send silver for realisation in London, and to pay his debt out of the sterling proceeds.

The Silver "Specie Points".—It will thus be clear that, just as the gold points between gold standard countries act as limits to the rates of exchange between them, so also the cost of buying silver and moving it to or from a silver standard country imposes fluctuating limits to the prices of remittances which we may describe as "silver specie points". If, for example, 100 silver dollars are sent from Hong Kong to London, they will always realise in London the market price for silver *less* the expenses of transmission from Hong Kong. On the other hand, the silver bullion content of 100 silver dollars, if sent from London to Hong Kong, will always realise 100 silver dollars *less* the expenses of transmission. Between a silver centre and London (or any other gold centre), therefore, there are limits on both sides to the price of remittances, which, though fluctuating according to the changes in the value of silver, can neither rise much higher nor fall much lower than the value of the silver currency at the

market price of silver *plus* or *minus* the expenses of transmission to the country concerned.

In the same way as gold tends to move to or from a gold standard country when the balance of indebtedness turns in its favour or against it, so silver tends to flow out of a silver country when the balance of indebtedness is unfavourable, and to flow into that country when the balance is favourable. But just as the movement of gold between gold standard countries is carried out mainly by bankers and bullion dealers, so the shipment of silver to and from silver countries is practically monopolised by such dealers, who, moreover, handle most of the exchange business with silver countries.

Eastern Bankers' Limits for Buying and Selling Exchange.—

Actually, the rates of exchange between Eastern centres and London are fixed by the banks in the East. The basic rate is that for T.T.'s, though the banks have regularly to quote for the sale and purchase of sight drafts and long bills, and, in doing so, are guided by the discount rate ruling here, while account is also taken of stamps and any other expenses. The Eastern branches are in constant telegraphic communication with their London offices, which keep them closely advised of the sterling price of silver, discount movements, and of the tendency of the Money Market generally.

The basic rate, for T.T.'s, naturally depends on conditions of demand and supply, but, in the long run, the price at which a banker in the East will buy or sell exchange is governed by the price at which he can cover. At some seasons his ordinary customers will provide him with sufficient bills to meet his sales of drafts on London; at others, his drawings on London will be considerably in excess of his purchases of bills (in the ordinary course of business) and he is driven to the open market. His funds in London will be provided by his floating balance with his agent or head office; his current remittances (i.e., purchases of bills and T.T.'s); and credits on account of drawings on him by his London agent or head office, and on account of the latter's T.T.'s, mail transfers, etc., on him. When he has exhausted these, either (a) he may instruct his London agent to draw on him and dispose of the bills so drawn for cash in London; or (b) he may draw against an overdraft in London. Naturally, he will not do this unless the rate is sufficiently favourable to cover all his expenses, but, in any case, the rate cannot pass beyond the export specie point, for, if it did, the banker's customers would begin to move silver rather than pay his high prices for bank drafts. If, however, the demand for remittances on London were so strong as to force the rate to

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specie point, the Eastern banker would himself ship silver to be realised in London. But whereas the banker in a gold standard country who ships gold to another gold standard country knows what the gold will realise on arrival (because its price is more or less fixed), the shipper of silver is faced with the possibility of most serious fluctuations, unless he sells "forward" or "to arrive", by which is meant that he cables to London to sell his shipment of silver *immediately* for delivery when it reaches London.

Just as a heavy demand in China for exchange on other countries may cause silver to be sent abroad, so an excessive supply of exchange will cause rates to move in favour of China and so lead to an influx of silver. In each case the movement of silver brings about the necessary equilibrium between demand and supply.

Suppose, for instance, that at a given moment the price of silver is such that the export specie point from China is, say, 1s. 4d. per dollar, but that the demand for remittances on London forces the rate down to 1s. 3½d. In these circumstances, bankers in China will ship silver to London and will sell remittances against the proceeds. The effects of these transactions are: (1) to lower the price of silver in London; (2) to lower the cost of remittances in China; thus from two directions the equilibrating influence is felt.

It should be clear, therefore, that the prices charged by the bankers for remittances to and from silver countries (i.e., the rates of exchange on silver countries) are ultimately limited by the rates at which the bankers can cover their commitments by moving silver to the place of payment (or the receiving centre).

An Eastern banker who is selling bills on London is really buying local silver with his sterling balances, *so he will not sell his bills at a higher rate in pence (i.e., give his customers more pence per dollar) than he would have to pay for silver anywhere abroad after allowing for the cost of getting it to him.* (Note: The higher the exchange expressed in pence, the less remunerative it is to him to draw.)

Conversely, when he is buying bills on London (i.e., selling silver for sterling to be paid to him in London), *he will not accept fewer pence per dollar than he could obtain by shipping silver to London or some other centre, after allowing for the cost of transmission, which must, of course, be deducted from the rate expressed in pence per dollar.*

When he is buying sterling bills, the Eastern banker has to pay out silver. If the rate is low, he gets relatively few pence in London for each unit of silver paid out by him in the East, and he has to consider whether it would be cheaper to sell his silver in London or

elsewhere; in which case he has to pay for transmission, thus lowering the number of pence received per silver unit. In other words, the cost of transmission must be deducted from the sterling value of the silver contained in the dollar to arrive at the banker's buying rate.

It is important to notice that the Eastern banker will cover his commitments in silver in the cheapest possible way. If he has to buy silver, he will buy in the cheapest market; if he has to sell silver, he will sell it in the market which bids the best price.

So, too, a London banker who has to buy silver to cover his sales of silver currency cares nothing where the silver comes from, so long as he can keep down his costs. He may ship it from London, but more probably he will arrange to move it from India, or China, or Japan, whichever is the cheapest source. Other bankers will do likewise, and if it happens that they effect a saving in covering their commitments by the purchase of silver, the force of competition will lead them to pass on some of that saving to their customers. In other words, the lower the cost of moving silver, the lower the price charged by the banks for remittances.

Actually, there cannot for long be any appreciable margin between the cost of buying silver in one centre and the cost of buying it in another, for the price of silver, like that of gold, is a *world price*, and any price difference which may exist between any two centres soon disappears because of the actions of bankers in seeking to take advantage of that difference.

The Silver Parity. From what has been said above, it will be seen that the exchange between a gold standard country and a silver country fluctuates about what is called the *silver parity* (or "*relative par*"), the rate yielded by calculating, at the current market price of silver, the gold value of the silver content of the standard coin of the silver-using country. It will be observed that the silver parity is somewhat akin to the Mint Par, in that it expresses the relationship between the values of the bullion contents of the two currencies. But whereas in gold standard countries the price of gold is fixed within very narrow limits, so that the Mint Par between those countries is fixed, the price of silver fluctuates daily according to the supply of and demand for the metal, and, in consequence, the silver parity also fluctuates frequently.

It is explained later in this chapter that the world value of silver (as expressed mainly by its price on the London Bullion Market) is subject to great variations—far greater, in fact, than have ever been the case with gold. In general, therefore, the exchanges between

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London and silver countries fluctuate much more frequently and seriously than the gold exchanges, and exchange operations with silver standard countries are far more hazardous than exchange operations with gold standard countries. It is for this reason that exchange operations have long comprised an important part of the functions of the banks which operate in London and in the East, and it is for this reason, too, that prices of goods sold to silver-using countries by gold standard countries are generally quoted in the currency of the latter, so that the exchange risk is borne by the Eastern trader.

When London is off the gold standard and the gold equivalent of sterling fluctuates from day to day, another indeterminate factor is introduced into the calculation of the silver parity with sterling. But as the London quotation for silver is the basic world price, we may calculate a direct parity between sterling and silver without reference to the gold value of sterling.

Silver Exchange Constants.—The relationship between the price of silver in London and the rates of exchange on Eastern countries is such that it is possible, at any time, to determine what a particular rate of exchange should be by taking the market price and making certain established allowances for the cost of moving silver and for converting it into coin. In practice, this is effected quickly by the use of what is known as a *constant*, i.e., an arithmetical expression which gives the constant or permanent relationship between the price of British standard silver and the price of silver in the form of the currency of the centre whereon the exchange is to be calculated. An example will make this clearer.

The Hong Kong dollar contains actually 415·985 grains of silver, 900 fine. British standard silver is now 500 fine, but the London Market still quotes its silver prices per ounce of 480 grains of the old (pre-1920) standard fineness of 925, or $\frac{3}{4}\frac{7}{10}$ ths. (See Chapter XXV.) From these details we can obtain a *constant* which enables us easily to convert the London price of silver into the London price of Hong Kong dollars. We do this by the Chain Rule, as follows:—

Let the London price of silver be x pence per standard ounce; then:

$$\begin{aligned}
 & \text{? How many pence} = 1 \text{ Hong Kong dollar;} \\
 & \text{If 1 H.K. dollar} = 415\cdot985 \text{ grains H.K. standard silver;} \\
 & \text{Grains 1,000 H.K. silver} = 900 \text{ grains fine silver;} \\
 & \text{Grains fine 925} = 1,000 \text{ grains standard;} \\
 & \text{Grains standard 480} = x \text{ pence.} \\
 & \qquad \qquad \qquad = \frac{415\cdot985 \times 900 \times 1,000}{1,000 \times 925 \times 480} \times x \\
 & \text{Price constant} = \cdot843213 x
 \end{aligned}$$

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This means that if we know x , the London price of silver per standard ounce, we can multiply it by the *constant*, .843213, and obtain the value in pence of the silver in the Hong Kong dollar. If that silver is to be used for making payment in Hong Kong, we must allow for the cost of converting it into coin, and also for the expense of transport, including interest, thus: -

Constant	..	..	..	..	..	..	843213
Add for							
Seigniorage charge for minting, say 2 %	..	..					.001686
Freight, etc., say 1 %			..	..	..		.008432
Interest lost during transit, say 36 days at 4 %					..		.003373
Exchange constant	..	..					856704

By multiplying the London price per ounce for standard silver by this figure it should be possible to obtain the rate of exchange for T.T.'s between London and Hong Kong, and, so long as the various allowances for seigniorage, freight and interest remain unchanged, a figure such as this may be applied for the immediate calculation of the exchange rate according to fluctuations in the price of bar silver. Thus, if the London price is 24d. per ounce, then the rate of exchange for T.T. between Hong Kong and London should be:—

$$24 \times .856704 = 20.561, \text{ say } 1/8_{10}^9 \text{d.}$$

To determine the rate of exchange produced by shipping silver to London, the expenses would have to be *deducted from* the constant. But, as was explained earlier, shipments to London are usually sold forward, so that the constant must be applied to the price quoted for forward silver in London.

Similar constants are applied in the case of other silver exchanges, as, for example, to determine the T.T. rate per dollar between Shanghai and London, and the rate of exchange between Hong Kong and London when the dollars are obtained and moved from Bombay or Calcutta.

Every day the price of silver on the London Market is cabled out to the banks in the Eastern ports, and the constant current at the time is at once applied to determine the rates of exchange on London, subject, of course, to any adjustment of the constant necessitated by a change in any of its factors, and subject also to the power of the banks to vary their rates, *within the silver specie points*, according to conditions of demand and supply. The rates thus determined are then telegraphed to the various branch banks in the interior and at other ports, so that they, in turn, can fix the rates at which they can profitably buy and sell sterling.

It is most important to notice that these "silver constants" are operative even when sterling is not tied to gold. They are used to determine the ratio between *sterling* and silver without any necessary reference to the gold value of sterling.

The Purchasing Power Parity Between a Silver and a Gold Currency.—Because the value of silver has such a dominating influence on the rate of exchange between a silver currency and any other form of currency it must not be thought that the Purchasing Power Parity theory does not apply to such rates. This theory is applicable to *all* exchange rates, but in the case of silver rates it is obscured and adjustment is much delayed.

We have seen earlier that between two gold standard countries the purchasing power parity and the Mint Par tend to coincide. If owing to a change in the price levels of either or both of them the purchasing power parity is altered, the rate of exchange will tend to move to the new purchasing power parity. If the rate moves outside the specie points, gold will flow from one country to the other, lowering the price level in the sending country, and raising the price level in the receiving country. Thus *both* price levels are altered to re-establish the purchasing power parity at about the Mint Par.

The case of a rate between a silver currency and any other currency is somewhat analogous, for the purchasing power parity tends to coincide with the silver parity. But where they diverge, and bullion is shipped, the price level of only *one* country will be affected, and hence adjustment will be more protracted.

As a rule, silver will be the metal shipped, which means that adjustment must be effected in the price level of the silver standard country. The price level in that country will be slower to respond to bullion movements than would the price level in one of the leading gold standard countries, because the silver-using countries are backward, their inhabitants are poor and tend to produce mainly for their own consumption, there is a tendency to resist change, and the volume of external trade is very small compared with the volume of internal trade.

Adjustment will be still further delayed by the fact that the silver parity itself is constantly changing. No sooner has equality been established between the purchasing power parity and the silver parity than the latter alters and sets in motion economic forces tending to an adjustment at the new level. But these forces will take some time to work themselves out, and, in the meantime, the price of silver, and hence the silver parity, will again have altered, probably many

times, and each alteration will affect those forces which are tending to effect equilibrium. From this it can be seen that adjustment is likely to be a never-ending process.

Fluctuations in the Price of Silver.—We have observed that every change in the price of silver in London affects the current rates of exchange between London and the silver-using countries. In the case of gold, there is always a strong demand for the metal, because so many countries use it as a monetary standard, and its value is fairly constant all the world over, since definite relationships exist between the various gold currencies. But silver is used in most countries only for *token* coinage, whose circulation is deliberately restricted. The Government sees to it that enough is issued for trade requirements, and no more. Hence, there is no unrestricted demand for silver as there is almost everywhere for gold; only silver standard countries demand silver in large amounts, and therefore when a great mine is opened up, or some great hoard of silver is suddenly thrown on the Market, the price drops immediately. Supply exceeds demand, until the surplus is used up in the arts or is absorbed by the silver countries.

In recent years, the value of silver, as indicated by its price in London, has fluctuated violently. At the outbreak of war in 1914, the price of silver stood at about 26d. per ounce standard, but the heavy War and post-war demands for the metal for currency, for war medals and for other purposes, combined with a falling off in supplies, caused its price to rise continually, until the record level of 89½d. per ounce was attained in February, 1920.

In 1921 the price of silver collapsed with remarkable suddenness in consequence of greatly increased production from the mines and the release of large quantities of the metal by the U.S.A. and other countries. Following this, the price remained stable for some years at about 24d. per ounce, but a further steep fall was experienced from 1929 onwards, and quotations as low as 12d. per ounce were recorded in 1931. This fall was attributable to several factors:—

- (1) The decreased use of silver for subsidiary coinages by many gold standard countries, owing to the substitution of nickel coins and notes for small amounts, and the debasement of the British silver coinage.
- (2) The increased use of paper money in place of silver rupees which, in 1920, followed India's adoption of the gold standard in place of the existing sterling exchange standard.

As a result, the Indian Government was saddled with huge quantities of silver, and her attempts to realise these helped to flood the silver market.

- (3) The general fall in commodity prices in terms of gold, silver being, of course, an ordinary commodity in gold-using countries.
- (4) The increased production of the metal owing to: (a) comparatively quiet conditions in Mexico (one of the chief producing countries); (b) improved methods of extraction; and (c) the increased quantity obtained as a by-product of base metal mining which has attained greater extent and importance since the War.
- (5) Heavy sales of silver by China necessitated by the heavy surplus of imports over exports, which had fallen off mainly because of internal disturbances.

Since the suspension of the gold standard by Britain in September, 1931, the sterling price of silver has reflected the depreciation of the pound in terms of gold and has risen to the neighbourhood of 18d. per ounce.

Effects of Fluctuations in the Value of Silver.—Such marked fluctuations in the world value of silver could not fail to bring about violent movements in the rates of exchange between silver currencies and other currencies. The general effect of the post-war rise in the price of silver was greatly to increase the value of the currencies of the silver standard nations, and to lower the relative value of other currencies. The pound sterling, for example, depreciated in countries such as India and China, and those exchanges moved increasingly against this country. Such erratic movements of the silver exchanges are naturally disastrous to trade relations. Incalculable elements of risk and speculation are introduced into all business transactions; producers and exporters are uncertain of their return, while importers and consumers are unable to estimate the prices they will have to pay for goods. The result is that business operations degenerate into mere gambling transactions, while legitimate trade languishes and eventually becomes practically impossible.

Although the violent fluctuations in the rates of exchange are disastrous to trade, changes in the relative values of silver currencies and other currencies may be attended by certain beneficial consequences. If the price of silver rises in London, the purchasing power of a silver currency in London is increased and our exchanges with silver standard countries will become *unfavourable* to us, i.e., sterling

will become cheaper in terms of silver currencies. Our exports to the silver countries are therefore stimulated, but our imports from such countries are discouraged, because the goods cost us more. This is a favourable movement as far as we are concerned and an unfavourable one for the silver countries; but at best the movement can only be temporary. The increase in the imports of the silver standard countries and the decrease in their exports will lead to the export of silver (or, in practice, to the temporary cessation of silver imports by those countries), which will cause a fall in its price. In consequence, the rates of exchange (in pence per silver unit) will fall and the direction of trade will again turn.

Sufficient has been said to indicate that the price of silver is highly important to merchants who specialise in trade with silver-using countries, and that they are, in consequence, far more intimately concerned with the course of the exchanges than are merchants who deal primarily with gold standard countries. If an English exporter sells goods to a silver-using country on the basis of payment in silver currency, he can never be certain of the ultimate return for his goods in his own currency. If he contracted to supply \$10,000 worth of goods to Hong Kong at a time when the dollar was worth, say, 2s., and agreed to take payment in the silver currency, he might find when the time came for settlement that the dollar had fallen in value to 1s. 6d., in which case he would receive one-quarter less than he should do, i.e., £750 instead of £1,000. In like manner, an importer from a silver country who buys on the understanding that he will pay in silver currency may find himself compelled to pay such a high rate of exchange as will deprive him of any prospect of profit.

Thus, the speculative uncertainty of the exchange is superimposed on the usual and unavoidable business risks which any trader stands prepared to accept, and, while the chances of extra profit are probably as great as the prospects of loss, the speculative element is usually far too great to be accepted by the ordinary trader in countries accustomed to more stable conditions.

For these reasons, exporters of goods to silver countries generally fix their prices in one of the leading world currencies and stipulate for payment in terms of the same currency, thus placing the onus of the exchange operation on the Eastern importer, who, of course, is faced with difficulties similar to those explained above. As a rule, the exporter in this country stipulates for payment by sterling T.T. on London, or arranges to draw on the Eastern importer a sterling bill enforced with one of the exchange clauses described in Chapter VII.

"Hedging" in Silver Transactions.—Merchants who deal with silver standard countries, and who cannot place the exchange risk on the other party to a transaction, are not able to cover themselves by forward exchange operations, as the banks do not undertake forward transactions in silver currencies. Nevertheless, a large importer or exporter dealing with, say, China, who has arranged to pay or accept payment in Chinese dollars, can to some extent cover himself against loss through a change in the value of the dollar by entering into a forward transaction in *silver* on the London Market.

For instance, suppose a London merchant has entered into a contract for the shipment of goods from China, and has agreed to pay \$50,000 in two months' time. In order to protect himself against loss through an appreciation of the dollar he could buy the dollars at once. But this would necessitate an unprofitable lock-up of his funds for two months. He can protect himself almost as fully by *buying forward* the silver equivalent of \$50,000 on the London Bullion Market (where silver is sold "to arrive", two months forward—see Chapter XVI); then, when the two months elapse, he can sell the silver "spot". If the price of silver has *risen* he will have made a profit on the hedging operation; but since the value of the Chinese dollar will have risen roughly in the same proportion, he will lose this profit in the increased price he now has to pay for his dollars. Actually, the "hedge" will not afford a perfect cover because the exchanges do not *exactly* reflect every change in the price of silver; but it will protect the merchant against loss due to *major* fluctuations in the exchange.

Since the forward price of silver is quoted for delivery *two months* ahead, and at no other maturity, the merchant who has contracted to pay out dollars at a longer period, say four months, must carry out his hedging operation in two stages, i.e., he will buy silver "for arrival" in two months, and, at the end of that period, he will sell spot and buy two months' forward again. In this case the cover is still less complete than in the first instance mentioned; but, as already stated, it is better than no cover at all.

A London *exporter*, it follows, can protect himself, when he is expecting payment in silver dollars, by *selling* silver to arrive, and buying it in at the spot price when the two months elapse.

Investment in Silver Countries.—The Eastern silver-using countries are among those which have benefited greatly from the investment of funds by the great lending nations, notably Britain and the United States. But the investor who places his money in investments in

these countries is in precisely the same position as the merchant so far as the hazards of silver fluctuations are concerned. He may invest his savings at an apparently profitable rate when the silver currency is relatively dear in terms of his currency, and subsequently find that a fall in the world value of silver has reduced his dividend payments very considerably, and wiped out a large proportion of his capital.

For these reasons, financial houses in the leading centres who sponsor the issue of loans to silver countries take every possible precaution to protect the investor against exchange loss. They commonly stipulate that dividends and coupons shall be paid, and loans repaid, in terms of a leading world currency (frequently sterling), so that the onus of arranging the necessary exchange transactions is placed on the foreign Government or corporation benefiting from the loan or investment.

THE CHINESE EXCHANGE.

China, the most populous country in the world, is not only the largest country which still continues to use silver as a basis of internal exchange, but is also one of the major factors in the Silver Bullion Market. China, like India, has long acted as a vast absorber and hoarder of the world's silver supplies, as may be gauged from the fact that in the five years 1924-29, India and China between them absorbed 940 million fine ounces out of the total world's supply of 1,424 million fine ounces, or about 66 % of the whole.

Unfortunately, China's currency position has always been a highly unsatisfactory one from the standpoint of Western peoples. Although in 1933 the Chinese Government established a new silver dollar as the national currency unit (see below), business transactions in China have for centuries been conducted in terms of the *tael*, which is a weight of silver and not a coin, its actual value differing in various centres. Of the eighty known varieties, the chief are the taels of Shanghai, Canton, Haikwan and K'uping, all differing in weight, fineness and exchange value. The exchange rates between China and London were, until recently, quoted in terms of the Shanghai and Canton taels, while the K'uping tael was used for all official Government purposes except for the payment of customs dues, which had to be paid in terms of the Haikwan tael. The various taels pass from hand to hand in the form of ingots or "shoes" of silver, varying considerably in weight, but being usually in the neighbourhood of 50 taels. These shoes (so called from their shape) are known as *sycee*, from the European

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pronunciation of the Chinese words *sai sau*, meaning "fine silver". The average fineness (or "touch") of sycee silver is in the neighbourhood of 985, but some idea of the uncertainty which attaches to its valuation may be gauged from the fact that sycee silver exchanges for Shanghai currency on the basis of a fineness of 913.

Several varieties of silver dollar have long circulated in the country districts. For upwards of fifty years prior to the revolution of 1911 the most widely used was the *Mexican silver dollar*, which superseded its predecessor, the Carolus (or Spanish) dollar, also minted in Mexico during the time when that country was a Spanish colony. The actual coins in circulation were considerably debased, and, apart from this, they circulated side by side with imitations, manufactured by Chinese silversmiths. Thus, although the legal weight of the Mexican dollar is 417·8 grains, $\cdot 902\frac{65}{100}$ fine, the majority of the coins in actual circulation differed from this standard both in weight and in fineness, the average weight being in the neighbourhood of 416·5 grains and the average fineness about ·898. In consequence of this debasement and issue of imitations, the exchange houses resorted to the practice of marking (or "*chopping*") the genuine Mexican dollars so that they could at once be recognised, and coins not bearing the *chop* were accepted by weight and not by count.

From time to time successive Chinese Governments have attempted to reorganise the currency by minting silver dollars to replace the foreign issues. In 1890 the Imperial Government authorised coins which subsequently became known as "*Dragon*" dollars. Each province issued its quota of the coins, but they were so debased both in weight and in fineness that their circulation between the various provinces was hindered, while merchants would accept them only by weight. In 1910 an attempt was made to unify the currency by the introduction of a standard silver dollar for the whole country, but it was not until 1914 that anything was done. In that year the *Yuan Shih Kai dollar* was issued, its official weight being 7 mace 2 candareens of a K'uping tael, and its original fineness 900, although this was subsequently reduced to 890.

The Chinese "Cash".—To make confusion worse confounded, there is the fact that, whereas business transactions, particularly in the wholesale trade, are conducted in terms of taels or dollars, yet probably 390,000,000 of the 400,000,000 or so Chinese use nothing but the "vulgar" copper *cash* or *li*, the native tokens of uncertain value kept for safety on a piece of string. The vagaries of this currency have been most amusingly described by Mr. Edwin J. Dingle in the

Financial Times. "Nobody", he says, "knows the value of cash. In some parts of China, it is reckoned to be one-thousandth part of a tael, but in other parts the copper cent (nominally one-hundredth of a dollar--the dollar being from 70 to 75 hundredths of a tael) bears the superscription 'representing ten cash'. Generally speaking, however, a cash is nominally one-tenth part of a cent, and exchange varies all the way from, say, 1,050 to 1,850 to the dollar.

"More often than not, a hundred cash is not a hundred, and a thousand cash is not a thousand, but some other and totally uncertain number, to be ascertained only by experience. In wide regions in China one cash often counts as two--that is, it does so in numbers above 20--so that when one hears that he is to be paid 500 cash he understands that he will receive 250 pieces, less any local abatement, which perpetually shifts in different places.

"Then there is a constant mixture of small and spurious cash, leading to inevitable dispute between dealers in any commodity. At irregular intervals local magistrates become impressed with the evil of this abasement of the currency and issue stern proclamations against it. This gives the swarm of underlings in the magistrate's jurisdiction a chance to levy 'squeezes' on all cash shops in the district; then the rain comes down and washes the ink from the public proclamation, and all is serene again.

"In China money is truly filthy lucre, but all the same, for centuries that dirty little coin with a hole in the middle has been the only money that the proletariat has known, and, in the opinion of the writer, a settled currency on either a gold or silver basis will not be workable in the far interior for a long time to come."

Naturally, the existence of such a variety of coins, and the fact that they are almost always debased, causes great complications and inconvenience. The position is by no means improved by the circulation in certain parts of China of notes of various denomination issued by more or less constituted authority. Some of these are accepted only at a big discount, and their values vary considerably as between one district and another.

China's New Dollar Currency (1933).—It has been long recognised by progressive Chinese that a uniform currency is badly needed in China, and, when the new central bank of China was established in November, 1928, the Governor announced the intention of the authorities to standardise the currency on the basis of the silver dollar current in Hong Kong. Nothing was done until 1933, but early in that year an attempt was made to establish a standard silver coin, and this

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latest attempt seems likely to be successful. On 1st March, 1933, the Chinese Government promulgated an order intended to bring about the abolition of the tael and the substitution of a new standard silver dollar. A new central mint was opened in Shanghai to coin the new dollars, which weigh 26·6971 grammes, contain 88 % of pure silver, and are exchangeable for the Shanghai tael on the basis of 71·50 taels for \$100.

The new dollars at first appeared to find little acceptance, and the exchange rates continued to be quoted in taels. In April, 1933, therefore, in an endeavour to force the use of the new dollar, the Chinese Government required all private and public transactions to be made in terms of silver dollars, and provided that any transactions that were not so made would be null and void at law. Furthermore, an export tax of $2\frac{1}{4}$ % was imposed on silver bullion in order to induce the banks to have their silver minted into dollars, the cost of mintage being the same as the new duty.

Despite the obvious advantages of a centralised standard coinage to replace the tael, the banks hesitated for some time to abandon the tael as a unit because of their lack of confidence in the new dollar, and their doubt as to the adequacy of the arrangements made for supplying and maintaining it, in view of past experience of the efforts of Chinese Governments to introduce a new standard coin. By May, 1934, however, their major doubts appear to have been set at rest, for the method of quoting the exchange with Shanghai was altered from pence *per tael* to pence *per dollar*.

Prospects of a Gold Standard. Although the supporters of the silver standard in China are particularly numerous, many influential people in that country favour the adoption of a gold standard, and in 1929 a Commission was set up under the Chairmanship of Dr. Edwin Kemmerer, charged with formulating some plan for the establishment of a uniform Chinese currency on a gold basis.

This Commission reported in April, 1930, and its main recommendations were that:—

- (1) China should establish a Gold Exchange Standard.
- (2) A new currency unit should be instituted, to be known as the "sun", having a parity of ls. 7·77265d. with sterling and \$0·40 with the United States dollar.
- (3) Gold should not be used for internal circulation, but for this purpose there should be issued a token coinage of silver, nickel and copper.

- (4) A gold standard trust fund should be established amounting to at least 35 % of the total value of the coinage.
- (5) The trust fund should consist of two parts: (a) gold and gold exchange held in New York and London; (b) gold coins and bullion in China.

Since this report, conditions in China have been subject to such frequent political disturbances that no move has been made in the matter, and, in view of the recent introduction of the standard silver dollar, it does not seem likely that China will adopt the foregoing recommendations—at least for many years to come.

London Exchange Rates on China.—In view of the confused state of the currency and of the uncertainty attaching to the value of silver in terms of gold, it is scarcely surprising that the problem of the Chinese exchange is one of the greatest complexity. Fortunately, however, the position is to some extent ameliorated by the fact that the bulk of China's business with the rest of the world is conducted through Hong Kong and the treaty ports of Shanghai and Canton, which have made rapid progress under Western influence, and which, through their world-renowned banks, conduct the greater part of China's foreign exchange operations on a basis intelligible to Western peoples. For these reasons, the principal rates quoted between China and other countries are those on Shanghai and Hong Kong, which are expressed in terms of shillings and pence per Shanghai dollar and Hong Kong dollar respectively.

Thus the basic London exchange rate on the former centre is that for Telegraphic Transfers, by which a specified sum in sterling is paid in London for each silver dollar laid down in Shanghai. The Eastern banks in China quote cheaper rates for first-class bank bills at four and six months' sight on London.

The rates with London are chiefly fixed in the Chinese centres, since the majority of debts between the two countries are settled by bills drawn on London. Chinese imports from Britain are paid for by bills on London, and Chinese exporters obtain payment by drawing and selling sterling bills. China's trade with other nations is also largely settled by London bills, under arrangements with London financial houses. In fact, China is an excellent example of a country which utilises London bills to their full extent, in the manner described in Chapter V, thus exemplifying the truth of the statement that "London draws few bills but accepts many".

THE REVALORISATION OF SILVER.

It has already been pointed out that a fall in the value of silver decreases the external purchasing power of the silver currencies and so leads to decreased imports by the silver countries. At the same time, it cheapens the exports of the silver countries and either leads to an increase in their exports or, if this is not possible—as was the case, for example, during the early period of the present depression—it leads to a lowering of the prices of similar exports from other countries. Clearly this course of events will have disadvantageous repercussions on international trade. The decreased imports of silver countries affect the exports and hence the prosperity of the industrialised nations, while the decreased prosperity of those countries reflects on the nations producing primary products, many of which are also adversely affected by the reduction in price of the exports from silver standard countries.

It is argued that, if the price of silver could be raised, the silver markets of the East would have greater purchasing power and would thus buy more from the industrial nations. It is thought that this increased purchasing power would arise not only from the increased value of the silver currency itself, but also from the increased value of silver hoards, which constitute a large part of the wealth of Eastern races, and which, if increased in value, would probably be more freely spent. Hence, it is maintained, raising the price of silver would be a measure likely to have important effects as a remedy for the present world depression.

One of the most obvious ways by which the price of silver could be artificially raised is by a restriction of supplies of the metal on the Market, and one of the few achievements of the World Economic Conference of 1933 was a *Silver Agreement* having this end in view. Since 1927, when India decided to adopt the gold standard, and, to that end, proceeded to dispose of her enormous stock of about 400 million ounces of silver with a view to replacing it with gold or gold exchange, the world has lived in fear of a wholesale dumping by India of her silver stocks, with serious effects on the world price of the metal. Hence, the London Silver Agreement provided that for four years (the life of the Agreement) sales of silver by India and Spain should be restricted to a specified amount, that the Governments of silver-producing countries should purchase or otherwise keep off the Market a quantity of silver, equivalent to the amount sold by India, and that China should not sell any demonetised silver. It was claimed

for this arrangement that it would have the result of raising silver prices because its effect would be to withdraw from the Market roughly 22 % of the new production of silver from the mines.

For several reasons, doubts were cast on the effectiveness of the Agreement to raise the price of silver. It was argued, in the first place, that the amount fixed for maximum sales by India exceeded the average annual *actual* sales since 1927. Secondly, it was considered that the restriction on sales of demonetised silver by China did not apply to bullion (e.g., in the form of *sycee*) held by the banks, of which there is a huge stock; and, thirdly, it was argued that the quantity of silver specified for absorption by the Governments of silver-producing countries was so small as likely to be of negligible effect, for at the time of the Agreement Mexico alone was already absorbing over two-thirds of that quantity. That these doubts were justified is indicated by the fact that there has been practically no change in the price of silver since the conclusion of the Agreement.

Even if a practicable scheme for artificially raising the price of silver could be devised, it is by no means certain that such a scheme would be quite so beneficial as many imagine. There seems no reason why Eastern people should dissipate more of their hoards in purchases of European goods merely because those hoards have increased in value. And if we admit that a rise in the price of silver will increase the purchasing power of Eastern nations, and even if we assume that silver hoards would be increasingly used to make purchases of foreign goods, the higher price of silver would not increase prosperity in the East. It would, in fact, destroy itself, unless it were part of a *general world rise in commodity prices*.

The truth of this will immediately become apparent upon a closer examination. If the price of silver is raised whilst prices in general (and especially the prices of Eastern export produce) remain constant or fall, the exchange value of silver currencies will rise and the purchasing power of Eastern silver countries will undoubtedly be increased. This will lead to increased imports into silver-using countries and to a decrease in their exports. But before very long this change in the direction of trade will cause the exchange value of the silver currency to fall again, and silver will be exported. These exports will tend to cause the value of silver to fall, and such exports, as well as the tendency of the price of silver to fall, will continue until the former equilibrium is re-established.

In other words, any attempt to raise the price of silver to an artificial level will set in motion forces tending to bring the price back

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to the economic level, and these forces will become ever stronger, necessitating even more vigorous action to maintain the value of silver. Gradually, prices in the silver countries may tend to fall and those in the gold countries may be influenced upwards by the increased demand from the East; but these movements will be very gradual, and pending the adjustment of prices in the gold and silver countries it will become increasingly difficult to maintain the price of silver.

What the advocates of an enhanced silver price appear to overlook is that China (and any other silver standard country) does not pay for her imports with silver (the supplies of that metal, like the supplies of gold, are limited), but with her exports of beans, silk, textiles, groundnuts, tea, skins and coal. Hence, what is really needed to restore the purchasing power of the East is not a rise in the gold value of the currency of the silver countries, but a rise in the value and in the volume of *their exports*. To enforce a rise in the gold value of Chinese currency, for example, is merely to impose on China that *exchange appreciation* which Britain, the United States and Japan, amongst other nations, have themselves so anxiously sought to avoid. There would be some justification for such exchange appreciation if China were importing too little and exporting too much, but, actually, the reverse is the case. China's imports are greatly in excess of her exports, and there is a danger of great difficulty to both China and other nations if the disparity is increased because of an artificial increase in China's purchasing power.

It would seem, therefore, that the greatest hope lies in action to increase the gold value and volume of exports from China and other silver-using countries. If this could be effected, the result would be a natural and inevitable rise in the world price of silver. Certainly China would benefit from any plan likely to achieve greater *stability* in the value of silver in terms of gold and other commodities. But as against this, it has to be remembered that China is such a vast country and is so largely self-contained that she is not so susceptible to outside influences, such as the world price of silver, as is sometimes imagined. Only to a very moderate extent, for example, has she suffered from the world depression, while her internal prices have moved scarcely at all. China, indeed, is in great need of several things—better government, better communications, improved export prices and less taxation—in comparison with which a change in the price of silver appears to be of small moment. In this connection, the fact cannot be overlooked that China has even yet not ratified the London Silver Agreement.

Bimetallism.—In spite of the very grave doubts regarding the effectiveness of a rise in silver prices as a remedy for world difficulties, there are still many people, especially those representing the interests of silver producers, who continue to advocate an *artificial* rise in the value of silver. By some it is considered that it would be sufficient if international action were taken to raise the value of silver; but others go further and advocate a return to the system of Bimetallism.

This system involves the adoption of two metals—usually gold and silver—as legal tender for the payment of any amount at a legally fixed ratio, and the coinage of both metals with equal facilities. Bimetallism is otherwise known as the *Double Legal Tender System*, and was adopted in 1803 by France, and in 1865 by the *Latin Union*, comprising France, Belgium, Switzerland and Italy. Other Continental countries afterwards adopted the same principle, and, during the last decade of the nineteenth century, strenuous efforts were made to secure the adherence of Britain and other nations with a view to ensuring stability in the world value of silver.

The early Bimetallists advanced as their main argument the contention that the universal use of both silver and gold as *standard* money would stabilise the value of both and so lead to price steadiness throughout the world. They also maintained that world supplies of gold were likely ultimately to prove inadequate to satisfy the requirements of all countries if they persisted in their adherence to Monometallism.

Experience showed, however, that Bimetallism had two serious disadvantages: (a) the great difficulty of maintaining the mint ratio between the metals in face of constant fluctuations in the ratio between their market prices; and (b) the impossibility of preventing the under-rated metal from being driven out of circulation as soon as the market prices diverged from the mint ratio, resulting in an alternating currency first of gold and then of silver.

GRESHAM'S LAW.—This latter tendency is recognised in what is known as *Gresham's Law*, which is to the effect that *bad money tends to drive good money out of circulation*, i.e., that if there are two forms of currency circulating side by side (e.g., silver and gold; or gold and paper; or silver and paper), and one of the two forms of currency is more valuable (i.e., has a higher commodity value) than the other, then the currency of higher value will be withdrawn from circulation whilst the currency of lower value will be retained to be used for current exchanges.

If, for instance, a country maintains a circulating currency which

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consists partly of full-weight coins and partly of debased coins, the full-weight coins tend to be withdrawn from circulation and to be hoarded or melted down or sent abroad in settlement of debt or for profit, whereas the light-weight coins tend to be retained in circulation.

In earlier times this frequently happened. Goldsmiths and bankers who traded in gold kept back the full-weight coins coming into their hands, and passed on those which were worn or debased. As the metal was sold by weight, heavier coins were obviously more profitable to export, since light-weight coins could be used for internal purposes just as well as those fresh from the Mint, so long as no law prohibited their tender or acceptance.

For the operation of Gresham's law two conditions are essential. First, there must be in circulation at least sufficient money for effecting the necessary exchanges within a community. Good money cannot be hoarded or exported if the circulating medium is scarce and is urgently needed for business requirements. It is for this reason that the circulation of token coins in modern communities is always restricted to the quantity required for small change and that the coins are made *limited* legal tender. If larger amounts were issued and the coins were made *unlimited* legal tender, there would be a tendency for the token coins to drive the standard money out of circulation.

Secondly, bad money cannot displace good if the community as a whole refuses to accept and to circulate it for exchange purposes. Under such conditions the good money will be retained against any pressure tending to its removal. Moreover, the depreciation of the currency may be so gradual as not to be noticed by the public until it has reached an advanced stage.

In modern times the operation of Gresham's law is obviated not only by a restriction on the issue of token coins, but also by a very careful control of other circulating coins. Light-weight coins are constantly withdrawn and reminted, and cease to be legal tender if they fall below certain legally fixed minima.

But experience has shown that there is great difficulty in preventing the operation of Gresham's law in those countries which have sought to maintain bimetallic systems. Under any such system the law fixes the value of one metal at a given ratio to the value of the other metal, but every time the ratio between the market prices of the two metals diverges from the bimetallic ratio, the effect is that the legal ratio in the bimetallic country overvalues one of the metals as compared with the other. If the two metals are gold and silver, and the bimetallic ratio is 15 of silver to 1 of gold, whereas the market ratio

is 16 of silver to 1 of gold, it is obvious that silver is overvalued in the bimetallic country. Silver will be the "bad" money and gold the "good" money of Gresham's law, and in accordance with that law, gold will be withdrawn from circulation for more profitable use elsewhere or for hoarding, whilst silver will continue to be used for internal exchange purposes at its enhanced value.

So far, it has proved impossible to devise any plan to maintain stability of the market ratio between the two metals, and so countries which have sought to maintain Bimetallism in the past have been faced with one difficulty after another because of the great fluctuations in the world price of silver.

France, in particular, as the staunchest supporter of Bimetallism, experienced great difficulty in adhering to her bimetallic arrangement. In fact, the system as it operated in that country had so broken down before the Great War that it was sometimes referred to derisively as the *étalon boiteux* or "limping" standard. Legally, the French national unit of account was the franc, defined as one gramme of silver, nine-tenths fine, and the silver 5-franc piece was legal tender for any amount on a par with gold. Yet there was no free mintage of silver and the silver currency actually in circulation was only .835 fine, while France's external exchanges were maintained on a purely gold basis, except that, whenever there was an exceptional demand for gold, the Bank of France prevented a drain on its reserves by paying out silver 5-franc pieces.

Modern Support for Bimetallism. --In spite of the disadvantages which have resulted in practice from the adoption of Bimetallism, many leading economists advocate a universal bimetallic system on a scientific basis. They contend that, if several of the leading countries co-operated to maintain the circulation of the two metals at a ratio fixed by international agreement, then no profit would accrue by exporting one of the metals from one country to another, and consequently Gresham's law would not operate. A strong combine of mints could arrange to maintain the joint standard by controlling the market price of bullion, and could prevent any serious divergence between the universal mint ratio and the market ratio. Such arrangements, they suggest, would not only make possible the advantages of a bimetallic system, but would also solve the difficulties nowadays experienced in exchanging gold standard currencies for the currencies of silver standard countries, as well as those arising from the world shortage of gold.

The United States, which produce a large part of the world supplies

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of silver, have long had leanings towards some arrangement that would increase both the demand for and the value of silver, and have long been sympathetic towards the proposals for Bimetallism.

In May, 1934, the States took an important step in the direction of Bimetallism when a Bill was introduced into the Senate and the House of Representatives to increase the amount of silver in the nation's monetary stocks with the object of having and maintaining one-fourth of their value in silver and three-fourths in gold. In his message outlining the proposed legislation, President Roosevelt referred to the desirability of broadening the metallic base of the monetary system, and to the advantages which would follow the increased use of silver (e.g., in place of bank notes of low denomination). He pointed out that some measures in this direction were appropriate to independent action, but that others required concerted international co-operation, or at least concerted action by a large group of important nations. Roosevelt also intimated that he had already taken some steps to confer with the neighbours of the United States (understood to be Canada and Mexico) regarding the use of both gold and silver, preferably on a co-ordinated basis, as the standard of monetary value.

It would thus appear likely that Bimetallism will in the near future be once again brought forward as a serious object for world co-operation. But it must be remembered that the United States have a direct interest in any measures taken to raise the value of silver, since they produce a large part of world supplies, and that other nations who have not similar interests may not be so ready to fall in with the suggestions. Thus there can be no doubt that real difficulty will lie in obtaining international agreement. The British Government, in particular, whose aid would be almost indispensable in re-establishing Bimetallism, has always set its face rigidly against it.

THE GOLD EXCHANGE STANDARD.

The system of currency known as the "Gold Exchange Standard" was originally a kind of "half-way house" between the silver standard referred to in the foregoing paragraphs and a full gold standard. This system has proved specially suitable to those countries which desire to regulate their *external* exchanges as far as is possible on a gold basis, but which are unable to adopt a full gold standard and so are obliged to retain either a paper or a silver currency for *internal* use, either because of the comparative poverty of their inhabitants, or because of their early stage of development, or because their resources have been impoverished by war or other destructive agency.

The gold exchange standard has been in operation in more countries than is generally known. India has probably had more experience of the system than any other country, as she operated this form of standard with a high degree of success from 1893 until her arrangements were disturbed by the Great War. Holland, Austria-Hungary and the Philippines are among the other countries in which the system operated successfully until the war period, while most of the countries whose currencies have had to be reorganised in consequence of the War—notably Austria, Hungary, Belgium* and Germany*—have applied the principles of the gold exchange standard in order to stabilise and maintain their rates of exchange with the gold standard countries.

The essential of the system is the provision of a cheap internal currency of *silver or paper and the maintenance of the value of that currency as near as practicable to a fixed par with gold* (or with the gold currency unit of another country) *by fixing the rate(s) at which the Government or central bank will convert the home currency into one or more of the chief gold currencies* and by strict regulation of the internal currency.

To achieve this, the State (or a central bank acting for the State) must possess either adequate reserves of gold or of its equivalent in the form of gold exchange, i.e., saleable exchange on one or some of the chief gold standard countries. If gold reserves are maintained, they are kept generally in the foreign centre whose currency unit is taken as a basis; thus, India's gold reserves have ordinarily been kept in London, those of Japan chiefly in New York, London and Paris, those of the Philippines in New York, and those of Java in Amsterdam.

Operation of the Gold Exchange Standard.—The establishment and maintenance of the reserves, and the conduct of the operations necessary to the successful working of the standard, imply close collaboration between the Government or central bank of the gold exchange country and the central bank of the country where the reserves are held. The reserves may be established in the first instance by the deposit of gold, or the floating of a loan, or the establishment of a credit in the gold centre. But, thereafter, they will be maintained through the action of the central bank in the gold exchange country holding itself open to purchase good class commercial bills, or any other form of debt payable in the gold centre, at or near the fixed rate of exchange between the two currencies. As a result, the bank will ordinarily hold among its assets considerable quantities of maturing bills (or "gold exchange"), the proceeds of which

* These countries subsequently adopted a gold bullion standard.

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are constantly becoming available for the replenishment of its reserves.

Against these reserves of gold or gold exchange, foreign exchange will be sold when the demand for remittances to other countries tends to force the exchange rate away from the fixed parity. The remittances are paid for either in notes or in silver, according to the currency of the country concerned; contraction of the circulation enhances the value of the unit and tends to restore the exchange, whilst the payment of the remittances lowers the reserve of gold in the foreign centre or lessens the amount of gold exchange held by the Government or central bank. Conversely, when there is a strong demand abroad for remittances to the gold exchange standard country, or, in that country, an excess supply of gold standard exchange, and the market exchange rates tend to move beyond the fixed limit, the Government or the central bank again steps in to prevent any great divergence from the parity. It does this either by holding itself open to buy gold exchange in unlimited quantity, or by selling for gold currency in foreign centres homeward remittances drawn on itself and payable in the home currency. In both cases, the effect is that the circulating currency of the gold exchange country is increased, the value of its unit falls, the exchange rate becomes more normal, and the gold currency received in the foreign centre adds to the reserve.

In brief, therefore, the effect of a gold exchange standard is to make the circulating currency (whether it consists of silver coins or of notes) *ultimately* convertible into gold at a fixed legal rate (or rates), and, as the central bank intervenes when the exchange has sufficiently diverged from parity to make the movement of gold profitable, the value of the paper or silver monetary unit is fixed within close limits of a certain defined ratio in terms of gold, or in terms of a gold standard currency, such limits corresponding to the incoming and outgoing specie points of a country on the full gold standard or on the gold bullion standard. The sale of gold exchange by the central bank (with its contractionary effect on the currency) is similar in its effect to an *export* of gold by a country maintaining the full gold standard; whilst the *purchase* of gold exchange (or the sale of *homeward* remittances) is precisely similar in its effect to an *import* of gold.

Advantages and Disadvantages of the Gold Exchange Standard.—Whether the currency consists of silver or of paper, the result of the adoption of the gold exchange standard is that the country concerned obtains a cheap, easily managed currency for internal use, and yet at the same time maintains a steady exchange operating on much

the same basis as if it were on a full gold standard. The system is specially suited to a country which is anxious to trade on a gold basis yet cannot afford the luxury of a full gold standard. It enables the exchange position to be adjusted quickly and easily according to the trade position; it enables trade to be conducted on a certain and non-speculative exchange basis; it permits reasonable control of the internal price level; and it ensures considerable economy of gold.

The gold exchange standard is not, however, entirely free from disadvantages, and three of these, in particular, may be mentioned.

In the first place, it involves artificial *management* of the currency by the Government or by the central bank (which is generally under State control), and thus lays the currency open to manipulation for purely political ends. It must be admitted, however, that there is no great disadvantage here, since, even in a country with a full gold standard, there is always the danger that a Government, when sufficiently hard-pressed, may resort to inconvertible note-issues.

Secondly, a nation having a gold exchange standard and therefore holding large balances abroad, to some extent sacrifices its autonomy and absolute independence in financial affairs, since its currency and exchange position must, of necessity, be closely bound up with those of the gold country wherein its reserves are held. This disadvantage, of course, is one which applies to *any* standard which involves the holding of reserves either in gold in a foreign centre or in saleable exchange on that centre. But the danger in the case of certain gold exchange standards has at times proved to be more acute because the reserves have been held *entirely in one centre*, which means that, if the currency of that centre is divorced from gold, the currency of the gold exchange centre is most likely to suffer the same fate, as happened in the case of India in 1931 when sterling and gold parted company. (See *post*, Chapter XX.)

Thirdly, the presence in such centres as New York and London of the reserves of gold exchange countries has rendered these centres extremely sensitive to external influences which have had nothing to do with their own trading or financial position (see page 303).

Essentials of the Gold Exchange System.—Quite apart from the question of the possession of adequate reserves in a gold centre, as well as resources at home, there are three essential conditions to the successful working of a gold exchange standard.

In the first place, *the home currency circulation must be subject to regulation by the Government and must be restricted to the needs of trade.* If too much currency is issued, its value will tend to fall irrespective

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of the exchange position, while, if too little is issued, its value will be forced upwards in spite of any Government attempt at control.

Hence, if the exchange conditions of a gold exchange country demand, the notes or silver coins paid for remittances to the gold centre must be kept out of circulation until the internal value of the monetary unit is forced up to the required level, and, if necessary, this appreciation must be stimulated by a suitable restriction of credit, brought about by the maintenance of a high rate of interest or otherwise.

Secondly, *the intrinsic worth of the home currency (i.e., its value as metal) must be well below the face value*, otherwise it would be impossible to expand the circulation. This, of course, follows from the fact that increased issues decrease the value of each currency unit; and, if this currency value falls below the bullion value, then currency will be withdrawn for use as bullion until the two values once more coincide.

In the third place, *there must be a close and friendly relationship between the country operating the gold exchange standard and the centre where its reserves are kept*. In this regard there is, of course, always the risk that the outbreak of war may cut off the two centres from each other, or that war may prevent the gold exchange country from obtaining possession of any reserves which it might hold abroad.

It is not necessary for the working of a gold exchange standard based either on silver or paper that the country concerned should keep *actual* gold reserves either at home or abroad, provided that it can otherwise arrange, when necessary, either to sell or to buy exchange on the gold centre. Nevertheless, the currency laws of most gold exchange countries require that part of the reserves shall be held in the form of gold.

INDIA'S CURRENCY AND EXCHANGE.

The currency unit and principal medium of exchange in India is the *silver rupee*, containing 180 grains of silver, $\frac{11}{12}$ ths fine, which circulates side by side with notes issued by the Government, and is legal tender for any amount. Prior to 1893, India had a silver standard currency based on the rupee, and her exchanges and trade were subject to those evil consequences, already noted, of frequent fluctuations in the gold price of silver. The urgent necessity for a stable basis of exchange decided the Government, after prolonged discussion, to undertake the regulation of the currency in order to stabilise the value of the rupee and steady the exchanges.

In taking this decision, the Government had to face the fact that, apart from the usual disadvantages attending the existence of a silver currency, India was beset with peculiar difficulties of her own. These were largely attributable to the fact that she was obliged to make large and regular payments abroad for the service of Government, for pensions, for military pay, and for purchases of bar silver for coinage, as well as on account of huge interest payments for the colossal amount of capital invested in her railways, her famine relief works, her irrigation schemes and agricultural enterprises.

The majority of such payments had to be made to the gold standard countries, principally England, whereas the revenue of the Indian Government was collected entirely in terms of the silver rupee, the gold value of which fluctuated markedly with every change in the world price of silver. The consequence was that the finances of the Indian Government suffered severely, and conditions became serious during the early nineties of the last century, when the value of the rupee in terms of gold rapidly depreciated.

As a preliminary step the Indian mints were, in 1893, closed to the free coinage of silver, with the object of enhancing the value of the currency by contracting its amount. The exchange gradually improved, and in 1899 the Indian Government undertook to issue in India rupees, or rupee notes, in exchange for gold sovereigns at the ratio of 15 rupees per £1, and definitely adopted the policy of maintaining the exchange with London at that ratio, i.e., at the value of 1s. 4d. per rupee, by selling exchange either in London or in India as was required to meet demands for remittances to and from India. In the same year, the English sovereign and half-sovereign were made legal tender in India at the rate of 15 rupees to the £1. This ratio was maintained for twenty years until 1919, when, in consequence of the great rise in the world price of silver, the value of the rupee was raised to 2s., i.e., 10 rupees per £1. (See below.)

The Gold Exchange Standard in India.—Under the gold exchange standard system operative in India during the period 1893–1920, the Government of India undertook to issue silver rupees or rupee notes in exchange for gold at the ratio fixed by law, at the offices of the Imperial Bank of India in Calcutta, Bombay and Madras. The Government influenced the exchanges by maintaining large reserves of gold in India and London, against either of which it sold remittances when conditions required. So long as the exchange was fairly normal, the Government interfered as little as possible, often not at all. But when the demand for remittances caused Indian bills to rise in price,

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and the value of the rupee in London rose above the fixed parity, then the Secretary of State for India sold *Council Bills* and *Telegraphic Transfers* in London drawn on the Indian Treasuries, in quantities varying with the course of the exchange. These bills and transfers were paid for in London in gold, and were paid in India by the Indian Government in rupees. The gold received in London increased the reserve, and was used to pay off India's indebtedness to Europe, while the rupees paid out in India increased the circulation in that country.

In addition to the Council Bills and the Telegraphic Transfers for immediate payment, the Secretary of State later issued "*Deferred T.T.'s*" for payment in India 18 days after payment in London. Sales of remittances were made by weekly tender through the Bank of England.

If the exchange moved in the reverse direction, i.e., against India, the value of the rupee fell below the fixed parity, and the Secretary of State abstained from selling Council Bills or Telegraphic Transfers in London. If the downward movement in the rate continued until the exchange reached the point when it was profitable to ship gold from India, the Indian Government sought to prevent the export of gold by selling bills in India drawn on its reserve in London. These remittances, called *Reverse Councils*, took the form of bills, or Telegraphic Transfers, and were paid for in India in rupees, thereby lessening the volume of currency in circulation. By retaining the rupees and notes so withdrawn from circulation, the Indian Government helped to restore the exchange and to maintain the value of the currency.

In both cases the net result was the same as if gold had been exported to, or imported from, London, but what actually happened was that the gold balance standing to the credit of the Secretary of State for India at the Bank of England expanded or contracted, and the rupee circulation in India varied proportionately. The Indian Government intervened when the value of the rupee moved sufficiently far from the fixed price to make profitable gold movements to or from India, and shipments of bullion were obviated as long as Council Bills could be obtained at lower rates than the cost of sending gold. The Government of India therefore not only undertook the supply and control of the currency in India, but also rendered great service to trade by remitting large sums of money on trade account. It obtained the money required for its disbursements in England and Europe, and provided bankers and merchants with a safe, simple and extremely convenient form of remittance to and from India.

Although the State thus aimed at stabilising the exchange, a

weak point was that whereas the Government was legally compelled to issue rupees in exchange for gold, it was not under an obligation to issue gold in exchange for rupees. Consequently, if the balance of indebtedness remained against India, and the supply of remittances by the State was exhausted, gold for export could not be obtained, and the rupee necessarily fell to its market value as silver bullion. This is what actually happened after the War, in spite of the Government's praiseworthy efforts to check the depreciation.

The Indian Exchange During and After the War.—The successful operation of India's Gold Exchange Standard was dependent on three important factors. In the first place, as the silver rupee was linked to gold on an artificially fixed basis, it could be maintained in circulation only if its market value as silver bullion remained *below* its artificial value as an exchange medium. If, for example, the rupee was exchangeable for gold at the rate of 15 rupees per sovereign, or 1s. 4d. per rupee, but its value as silver bullion reached 2s. in consequence of a rise in the world price of silver, then it was a practical certainty that many of the silver rupees in circulation would be melted down and sold as bullion either in India or abroad. When the gold value of the rupee was fixed at 1s. 4d., what may be termed the "melting point" was, in fact, reached when silver was about 43d. per ounce, and the success which attended the institution of the gold exchange standard in India would never have been possible had it not been for the fact that, during the twenty-five years from 1893 to 1917, the world price of silver did not exceed this limit.

Secondly, it will be appreciated that if the Indian Government was to continue to provide remittances on India in London, and remittances on London in India, it had to maintain at its disposal a sufficient supply of rupees in India and of sterling in London in order to encash its drafts when they were presented for payment. It does not require much imagination to understand that such an adjustment of balances required considerable administrative ability on the part of the financial officials responsible. This was particularly the case in view of the third factor, which demanded that, in order to maintain a fair degree of stability in the exchange, there should be a rough correspondence between India's annual balance of indebtedness (i.e., including bullion, goods and invisible items) and the balance of obligations which had to be met by the India Office. In other words, it was necessary that the balance of indebtedness should be favourable to the extent of the annual sums in sterling which had to be provided in London by the Indian Government. This was the more necessary

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as the Indian Government did not (as is now usual in gold exchange standard countries) hold a *large* reserve of gold or of sterling in London. Hence, there was always the danger that any unduly strong demand for sterling in India might cause a collapse of the rupee exchange.

Until 1917 the necessary conditions were fulfilled to a remarkable degree, and the gold exchange standard operated so successfully in the case of India that it was hailed in many quarters as the ideal exchange system. The Great War brought a profound change. From 1914 to 1919 India enjoyed a period of great prosperity. Her goods were in great demand, the annual trade balance was much to her advantage, and the value of her currency unit appreciated considerably in consequence of the great rise in the price of silver. This prosperity was destined, however, to bring in its train financial difficulties of the first importance. The spectacular rise of silver to more than double its pre-war price made the coined rupee far more valuable as bullion than as a medium of exchange at 1s. 4d., and the Government of India was therefore forced to raise the exchange value of its unit in order to prevent a wholesale melting down of the currency. Between August, 1917, and February, 1920, the price of silver rose from 46d. per ounce to 89d. per ounce, and during the same period the official value of the rupee was raised by successive steps from 1s. 4d. to 2s. 7d. Such fluctuations were naturally most disconcerting to traders, and consequently, on the advice of the Indian Committee on Exchange and Currency, 1919, an Act was passed in February, 1920, making the sovereign legal tender in India at the ratio of 10 rupees per sovereign, thus raising the gold value of the rupee from 1s. 4d. to 2s.

Once again, however, economic forces were to prove stronger than artificial regulations, and as from January, 1920, conditions inclined the other way. Foreign markets were glutted with Indian produce, and, whilst many European countries, owing to their inability to restore production, were unable to pay for Indian goods which they had purchased, others were resuming their pre-war export of machinery and manufactures to India. The trade balance thus moved against the country, and while there were heavy demands for Reverse Councils for making remittances to London, the sale of Council Bills on India fell off considerably and had eventually to be discontinued altogether. But this was by no means all. The difficulties attributable to the trade position were greatly accentuated by the rapid drop in the price of silver, which by March, 1921, had fallen to 30d. per ounce, just one-third of that ruling one year previously. Not unnaturally, full advantage was taken of such movements by specu-

lators in bullion and exchange, while the constantly increasing import trade led to large transfers of capital from India. The effect of these conditions was immediately reflected in the exchange, which, in spite of the vast amounts of Reverse Councils sold by the Government at a heavy loss in an endeavour to save the position, fell away until ultimately it reached the low level of 1s. 3½d. The fixing of the value of the rupee at 2s. had thus proved abortive. Consequently, in September, 1920, it was decided to stop the sale of Reverse Councils, and the Government abandoned its efforts to maintain the exchange by artificial means, leaving the value of the rupee to find its own level according to the prevailing market price of silver.

Fortunately, the results attending this decision were much less disturbing than might have been anticipated. After the violent reaction of 1921, India's trading position tended gradually to improve, the price of silver remained fairly steady, and consequently the value of the rupee and the Indian exchange fluctuated within comparatively narrow limits in the neighbourhood of 1s. 6d.

In 1923 the Government of India began to take over from the Secretary of State the control of the sale of Council Bills and Reverse Councils, and, as it was soon found that this was a more satisfactory arrangement, the entire control was by 1926 transferred to the Indian Government.

As might be expected, the fact that the value of the rupee remained fairly stable at 1s. 6d. over an extended period gave rise in many influential quarters to the demand that the exchange should be stabilised at 18d. The proposal resulted in an acute and prolonged controversy. An important section of the trading community favoured a return to the old basis of 16d. which India had so successfully maintained for nearly twenty-five years. Gradually, however, it became evident that Indian public opinion was strongly in favour of a complete reorganisation of the currency and exchange system with the object of superseding the gold exchange standard—apparently regarded “as a brand of subjection and inferiority by Indians”—in favour of a full gold standard, “considered as the sign and symbol of political freedom by the Indian people”.

The absolute breakdown of the gold exchange standard after the Great War was a strong factor in favour of reorganisation. The failure of India's exchange system had thoroughly disturbed her trade, had given rise to social, economic and political difficulty, and had involved her Government at one time in a loss of £25,000,000 in an endeavour to maintain the fixed ratio. In 1925 a Royal Commission

was appointed "to examine and report on the Indian exchange and currency system and practice, to consider whether any modifications are desirable in the interests of India, and to make recommendations".

In a long and exhaustive Report the Commission indicated its conclusion that India should supersede the gold exchange standard by a *gold bullion standard*, based on a silver rupee definitely linked to gold, and not merely to sterling, at the rate of 8.47512 grains of pure gold per rupee. The value of the rupee in terms of sterling would thus be fixed at 18d., or 13.33 rupees per £1, but the Commission recommended that the sovereign and half-sovereign should be demonetised and the rupee made sole legal tender. The Commission also advised the transfer of the control of the currency and exchange of India from the Government to a new central bank, which should be obliged to buy and sell gold bullion for rupees *without limit*, and for any purpose—internal or external—at rates based on the prescribed parity. It was maintained that this obligation would not only ensure the strict convertibility of silver rupees and rupee notes into gold, and therefore firmly establish the Indian currency on a gold basis at the fixed ratio, but would also ensure that the exchange with gold standard countries would be confined between the upper and lower gold points, marking the cost of moving gold to and from India; e.g., as between India and London, about 1s. 6³/₁₀d. and 1s. 5³/₄d. respectively.

While, therefore, the adoption of these arrangements would give India the benefit of a cheap and acceptable currency for internal use, the obligation to convert that currency into gold, not only for export *but for any purpose*, would give her all the advantages of an absolute gold standard. The principle would be established "that gold is the standard of Indian currency at a fixed ratio, and that the currency authority admits it, and must maintain it".* At the same time, the compensatory action of the movement of gold, both on the exchanges and on the price level, would be maintained. The sale of gold bullion for notes would contract the currency, lower prices and correct the exchanges by increasing exports and diminishing imports, while the purchase of gold bullion with rupees would have the reverse effect of expanding the currency, raising prices and correcting the exchanges by encouraging imports at the expense of exports.

Effect was given to several of the proposals of the Commission by the Indian Currency Act, 1927. The 18d. ratio and the demonetisation of the sovereign became law, but pending the establishment of the new central bank, the Indian Government as the currency authority was placed under obligation to *buy* bar gold, but was given

* *Report of the Indian Currency Commission*, § 61.

the option to *sell* for rupees either gold or gold exchange. The Government also continued, as hitherto, the sale of remittances to and from India in the manner operative under the gold exchange standard. India thus reached a transition stage between the gold exchange standard and the full gold bullion standard which she will ultimately adopt, but her revised currency and exchange system, although a "hybrid", afforded her people the satisfaction of having a unit which was free from fluctuations in terms of other gold currencies, and which had a steady and determinate international value.

Unfortunately, India's plans for the future were upset by the 1931 crisis, when the authorities were compelled to allow the rupee to depreciate along with sterling, to which it was still linked. The system thus reverted, in effect, to that of a *sterling exchange standard* (see below).

The Indian Government now manages the exchanges with the co-operation of the chief banks. Council Bills and Reverse Councils are no longer sold, but the Controller of the Currency now calls for weekly tenders for the sale of sterling to the Indian Government. The Indian banks make tenders and so dispose of their surplus sterling holdings. The Government is rarely called upon to *sell* remittances on London as these can usually be purchased more cheaply from the banks.

The Services of the Indian Exchange Banks.—Indian Government remittances have so long taken a leading part in the financing of Indian trade, that it is frequently forgotten that the Indian banks render considerable service in effecting settlements on trade account. Bills are drawn on or by Indian merchants in the usual way, and are sent forward for collection through the banks or are sold outright to them. And apart from buying and selling bills, the banks open credits either in London or in India, undertake acceptance business, arrange for the movement of bullion, and undertake collections in one country for their customers in the other.

An interesting point in connection with the price charged by the London banks for remittances to India has recently arisen as a result of the inauguration of the regular air mail service to that country. The time taken by the air mail is now so much less than it is by the sea route that sight drafts forwarded by the former means are presented for payment much sooner than would otherwise be the case, and are consequently charged for at 1/32nd of a penny more per rupee than the cheque rates applied to drafts forwarded by the sea route in the usual way.

Finally, we may observe that there is annually a considerable flow of gold to India in the form of sovereigns and gold bars, which, in

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ordinary circumstances, can be easily exchanged for or purchased with rupees or rupee notes. India is, in fact, a most voracious consumer of gold, large quantities being regularly imported from the London Bullion Market and direct from South Africa (see Chapter XVI). Much of this gold is hoarded or used for ornament, in which case it partakes of the nature of an ordinary commodity import.

In this connection, it is interesting to note that the high price of gold in terms of rupees which has prevailed since 1932 has caused the flow to be reversed, with the result that considerable quantities of gold from India have found their way to the London Bullion Market.

Sterling (and other Currency) Exchange Standards.—One great lesson which the world has learnt from the monetary experiences of India is that a gold exchange standard which is based on a single gold currency unit will continue to function successfully only so long as the value of the basic gold currency is absolutely on a par with the value of gold. So far, India's gold exchange standard has been in reality a "*Sterling exchange standard*"; the rupee has been linked to sterling and not directly to gold. Consequently, when sterling and gold have parted company, the gold exchange standard in India has lost its direct link with gold.

The realisation of the defects in the Indian system doubtless caused several of the countries which adopted the gold exchange standard after the War to fix the value of their currency, not in terms of another currency such as the pound sterling or the dollar, but in terms of a given quantity of gold. The post-war gold exchange standards have, therefore, much more right to the description than the so-called gold exchange standards of pre-war days, and the latter are probably best distinguished as "*currency exchange standards*", because their basis is a gold standard currency and not gold itself. The value of a true gold exchange standard currency varies only with the value of gold, whereas the value of a monetary unit which functions as part of a currency exchange standard must fluctuate with every variation in the gold value of the currency on which it is based.

The present currency system of the Irish Free State affords an example of a pure currency exchange standard, inasmuch as the Irish legal tender notes are directly convertible into sterling deliverable in London. But the fortunes of Ireland and Great Britain are so insolubly blended that any other system would be both inconvenient and uneconomical, and it is unlikely that the Free State will suffer any special disadvantage from the linking of her currency with the pound sterling instead of with gold.

CHAPTER XIX

RECENT EXCHANGE HISTORY

It has been stated at several points in the preceding pages that in consequence of the Great War the foreign exchanges were totally disorganised. The Mint Pairs of Exchange between the gold standard countries became items of historical rather than of practical import, while the specie points were entirely inoperative as limits to the rise and fall in the rates of exchange. This demoralisation was due principally to the fact that the financial strain resulting from the War led, in many countries, to the abandonment of the gold standard and to the issue of vast quantities of inconvertible paper money. Gold, and in some cases silver also, was driven from circulation, and the free export of the former metal was prohibited almost everywhere.)

Much of the gold currency thus withdrawn was hoarded, but more generally it found its way into Government or bank reserves to provide some backing for the issues of paper, and to be used for export when required. Prices in most countries rose to unprecedented levels, and throughout Europe the disorganisation of the national currencies created an atmosphere of such uncertainty that business activity was stifled and international trade demoralised.

The collapse of the currencies was accompanied in a number of cases by the total collapse or serious impairment of the credit of the countries concerned. Broadly speaking, the War destroyed the economic life of the chief European peoples, and so affected the other nations of the world that the whole fabric of national life and the wider international relationships had to be reconstructed. In the case of Russia and Germany, particularly, disorganisation was still further accentuated by political and social revolution.

The Effects of Inflation.—The painful, sometimes tragic, economic sufferings of the world since the Great War have been largely due to monetary mismanagement, evidenced mainly by the interminable inflation of the various currencies by the issue of inconvertible paper. Inflation may be defined as a deliberate expansion of currency and

credit beyond the amount necessary to meet the need of internal trade and exchange at the existing level of prices.

An expansion of currency and credit to satisfy demands which spring from the economic progress of a community is, of course, a most desirable and necessary thing and is not regarded as inflation. But inflation is an evil because the supply of currency and credit is arbitrarily increased, without reference to economic needs. The Government, in order to pay off a budget deficit or to meet extraordinary current requirements, is forced to borrow unduly from the central bank, and to liquidate the credits thus created has ultimately to issue, or authorise to be issued, more and still more currency. Usually, too, the Government inflates credit by encouraging the extension of bank credit, either to finance public subscriptions to Government loans or to finance the payment of high taxes imposed for emergency purposes.

Whichever method is adopted, the ultimate result is to place more purchasing power in the hands of the community than is necessary for the existing volume of trade. The result is that prices rise, wages rise, still more currency is requisitioned from the banks, credit expands, prices rise again, and so the vicious circle goes on.

The Problem of Stabilisation.—It is difficult to see how the vast expenditure of the belligerent countries during the War could have been met without inflation. But there is a limit to the extent to which a Government can finance itself by this unsound method.

Every increase in the quantity of an inflated currency lowers its purchasing power in terms of commodities generally, induces frequent and violent fluctuations in the rates of exchange and eventually makes trade wellnigh impossible. Finally, a stage is reached when something has to be done if international business is ever to be resumed on a reasonable, non-speculative basis.

The problem of post-war currency instability was tackled by statesmen, financial experts and economic theorists in almost every country, and gradually one point of unanimity emerged from the welter of conferences, resolutions and discussions. It was recognised that the main stumbling-blocks to economic progress and rehabilitation were uncertainty and insecurity. The need of the world was *stability*—stability of internal prices so that industry could thrive and the people prosper, and stability of the external exchanges so that international trade could be resumed with some certainty as to payment and ultimate profit.

Influenced by these considerations, the International Economic

Conference held at Genoa in 1922 adopted a recommendation of its expert committee advising the immediate stabilisation of inflated currencies as closely as possible to their then existing values in terms of gold, i.e., in terms of the gold standard currencies.

Devaluation and Deflation.—Now the stabilisation of a currency at an existing depreciated value meant, in effect, that the monetary unit must be regarded for the future as being worth, in terms of gold, only a fraction of its pre-inflationary gold value. It meant the acceptance of the fact that the restoration of the pre-war value of the currency had become impossible, and that the currency must be *devalued* by reducing its legal gold content to that extent necessary to make the mint parities with gold standard centres approximately equal to the existing rates of exchange.

The alternative to devaluation was *deflation*, defined by Professor Cassel * as "a process by which the internal value of the monetary unit is increased. This means a deliberate raising of the purchasing power of the unit in regard to commodities and services i.e., a general and uniform reduction of prices, wages and salaries as measured in terms of the monetary unit". This is effected by restricting the supply of the means of payment and consequently reducing nominal purchasing power in the hands of the public. Such action involves a rise in the central bank rate, a reduction of credit facilities and a greater discrimination in granting loans. At the same time, increased taxation and reduced Government expenditure are usually necessary in order to raise a fund for the reduction of excessive note issues. In consequence of the rapid fall in prices, capital development practically ceases, while repairs and renewals are reduced to a minimum. Producers curtail their output, and workers suffer through unemployment. Profits diminish and trade generally becomes depressed.

Both inflation and deflation have thus most important psychological effects on the economic organisation. While inflation tends to over-confidence, dangerous speculation, and an extension of business which is not justified by the real economic position, deflation tends to lack of confidence, stagnation and general depression.

It was, of course, recognised by France, Italy and other similarly placed countries who favoured deflation, that an *immediate* return to the pre-war basis was out of the question, since that would involve a far too violent fall in prices and profound economic disturbance. The effect of such a step would be to place on the depreciated currency an artificial exchange value which would hopelessly overvalue it in

* *The World's Monetary Problems*, p. 112.

the Foreign Exchange Market, i.e., the artificial value, when converted into foreign currencies, would give it a purchasing power abroad greatly in excess of its purchasing power at home. As a result, trade would be seriously disturbed. Foreigners would rush to sell their goods in so profitable a market, but home exporters would be discouraged from selling goods overseas. Imports would thus be encouraged and exports discouraged. Unless active Government measures were taken to support the exchange, as by borrowing abroad or raising adequate credits in other countries, the country would be drained of its gold to meet the adverse balance of payments. These conditions would persist until the influx of goods and the efflux of gold had raised the home purchasing power of the currency to its pre-war value. But the final cost, in the case of a badly depreciated currency, would far outweigh the sacrifice involved. Moreover, in some countries the depreciation had gone so far that the gold reserves would have been exhausted long before adjustment could be effected.

Although, for these reasons, the immediate restoration of the pre-war parity was recognised to be impossible, the countries which favoured a *gradual* return to that parity by steady deflation did not foresee the evil and cumulative effects of such a policy on the economic life of the community, and many valuable years were wasted in futile attempts to restore pre-war conditions.

The Case For and Against Deflation.—The arguments in favour of deflation were largely psychological and ethical. People in the countries which had suffered inflation could not get away from the idea that the War and post-war conditions were temporary disturbances which would ultimately give way to the "ideal" conditions of the "good old pre-war days". Such people overlooked the fact that the world's industrial and financial lay-out was changed completely by the War, and that adjustment to the *new* conditions was essential if progress was once more to be achieved.

A more reasonable psychological argument was that devaluation involved the admission that the currency concerned had become hopelessly depreciated—an admission regarded as damaging to the national pride, credit and reputation. Undoubtedly, this argument was one which could not be ignored in the case of our own country, with its world-wide financial interests and its position as an international monetary centre. Moreover, the immense total of our overseas investments was a strong practical argument against voluntarily reducing the world value of the capital sums due to us, which would be the effect of devaluating the pound. This aspect of the question

was of less moment in the case of countries such as France, Belgium and Italy, whose credit and national prestige were already damaged to a considerable degree by the violent fall and distressing fluctuations which had taken place in the value of their currencies.

On ethical grounds deflation was championed because it was considered that devaluation was not a policy worthy of any Government. Many people held that the Governments concerned were morally bound to restore the *status quo ante* by remedying the serious injustices between individuals which inflation had caused. But those who advanced this contention overlooked the fact that deflation *would* not and *could* not restore the *status quo*. In most countries, inflation had been so prolonged that time and change had already effaced many of its injustices. Investments had changed hands and debts had been transferred from one creditor to another.

The practical objections to deflation are even more weighty. A long-drawn-out restriction of credit necessarily imposes a serious drag upon industry and trade, since money-profits, which provide the incentive to production, are progressively reduced. And the evil is more than psychological: for *real* profits are also reduced, since costs fall less rapidly than the selling price of the product.

Moreover, deflation, by effecting a change in the value of money, causes a serious redistribution of wealth. The loss to the producer and the borrower—the *active* members of society—is a gain to the investor and lender—the *inactive* members of society. Thus social relationships are disturbed and property rights are seriously infringed.

On these and other grounds, far-seeing financial experts were convinced that deflation, as a general policy, was undesirable. True, it was generally (though by no means universally) agreed that, in the peculiar position of Britain, some degree of sacrifice to restore the pre-war gold value of sterling was justified. But in the case of other countries whose currencies had been subject to much greater depreciation, theorists recognised, long before statesmen would admit the fact, that deflation was not only undesirable but quite impossible, since any attempt to restore the pre-war value of the currencies concerned would have imposed an intolerable burden on the taxpayer and upon industry.

The Choice between a Currency's External and Internal Value.—It will now be apparent why most countries which had suffered from an inflated currency were ultimately compelled to resort to devaluation of the monetary unit in order to achieve stabilisation with the least possible friction and economic disturbance. Such countries had the

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choice of three alternatives for the new gold value of the currency: (a) the *external* value of the unit as indicated by the prevailing exchanges with the important gold standard centres; (b) the *internal* value of the currency as revealed by the nation's price index numbers; and (c) an *entirely new value* determined after expert examination of the financial and monetary conditions and needs of the country.

In accordance with the purchasing power parity theory of the exchanges, the tendency is for the external value of a currency to approximate, in the long run, to its internal value. But this adjustment is very indefinite, particularly in the case of an unstable currency whose value is subject to speculative and psychological influences. Usually such a currency is either *overvalued* or *undervalued* by the external exchange.

OVERVALUATION implies that the value of the currency in the Foreign Exchange Market is *higher* than its internal value. In other words, home prices converted into gold at the current rate of exchange are higher than world prices, and thus a stimulus is given to imports and a handicap is placed on exports.

UNDERVALUATION, on the other hand, implies that the value of the currency in the Foreign Exchange Market is *lower* than the internal value; in other words, home prices at the current rate of exchange are lower than world gold prices. As a result, exports are stimulated and imports discouraged.

Such undervaluation may result from speculative selling of the currency concerned in the exchange market, as happened, for instance, in the case of the "flight" from the franc and from the mark, when, owing to the fear of further inflation and lack of confidence in the future of these currencies, they were wildly sold to an extent that was not fully justified by their internal depreciation.

If a currency which is internally depreciated is thus undervalued in the Foreign Exchange Market, it is said to be *specifically* depreciated, and the amount of this specific depreciation measures the extent of the divergence of the prevailing exchange rate from the purchasing power parity.

Now, a Government which embarks on a stabilisation scheme must decide at the outset whether the currency shall be stabilised at its lower or at its higher value. In practice, this means that the currency may be stabilised either at the *current rate of exchange* or at an *alternative rate*, higher or lower than the current rate. Whichever alternative is finally adopted, some internal adjustment is bound to be necessary, and, as Professor T. E. Gregory has pointed out, the effects of stabiliza-

tion on the economic life of the country depend, not on whether the internal or external value is chosen, but on whether the higher or lower value is adopted as the future basis.

Stabilisation and Adjustment Crises.—If a currency is undervalued, and the external value (i.e., the lower value) as indicated by the current rate of exchange is adopted, the internal value will have to be *forced down* to the lower external value. This implies that internal prices must be raised, by a continuance or resumption of inflation, until they reach a level at which they are in equilibrium with external prices at the stabilisation rate adopted. While inflation is proceeding, exporting trades will be stimulated and imports will be discouraged by the existing undervaluation, until the margin between internal and external values disappears. At the same time, internal activity will be stimulated by the inflation of profits resulting from the rise in prices, and by the desire to acquire *goods* whose prices are rising rather than to hold a currency which is continually declining in value.

When once the necessary adjustment is achieved and parity is reached, the discontinuance of the inflationary process will result in the checking of the temporary boom, and cause what Professor Gregory has described as a *stabilisation crisis*. The country must then face the necessity for damping down expansion, and inflation must be stopped, otherwise internal and external values will once more get out of touch. Such was the experience of several countries, notably Germany and Belgium, where the stabilisation rates adopted did not fully represent the internal value of their currencies.

If, on the other hand, a currency is overvalued and the external value is adopted, the internal value will have to be *forced up* to the higher external value; in other words, home prices must be forced *down* by deflationary measures. This process causes a slackening in trade (owing mainly to the fall in prices), and, pending the adjustment between internal and external values, the fact that the currency is overvalued on the exchange market encourages imports and discourages exports. From both effects home producers suffer, and the crisis, which Professor Gregory distinguishes as an *adjustment crisis*, involves trade depression and unemployment. This was the experience of England and Sweden.

The second method given above is to stabilise the currency at its internal value. If, therefore, the currency is *overvalued* externally, the rate chosen will give the currency a *lower* value than is represented by the existing rate of exchange; hence, the Government will have to be prepared to force down the exchange rate. On the other hand, if

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the currency is *undervalued*, the rate of exchange chosen will give the currency a *higher* value than that actually prevailing, and the Government will have to force up the exchange rate. In either case, official pegging operations will be necessary. (See below.)

Thirdly, an entirely new value may be chosen, probably somewhere between the internal and the external values. In this case, the Government will have to operate not only on the exchanges but also on the domestic price level to bring both into line at the new rate.

Whichever method of stabilisation is adopted, some form of crisis is unavoidable so long as there is a divergence between the internal and external values of the currency concerned. Some classes in the community are bound to lose while others gain. On the grounds of equity there is much to be said for raising the value of a depreciated currency, but, in practice, the problem becomes one, not of ethics, but of expediency, and it is impossible to ensure justice for all classes. The simplest practical solution is undoubtedly to stabilise at the rate which is calculated least to disturb existing conditions, and post-war experience would seem to indicate that the adjustment crisis, involving internal deflation, is the more painful and prolonged method. In any case, the ultimate effects of the stabilisation process necessarily depend on the magnitude of the divergence between the internal and external values of the currency, on the elasticity of the factors of production, on the country's economic organisation and on the skill of those responsible for its monetary policy.

Stabilisation "De Facto" and "De Jure".—In most countries which determined on a policy of stabilisation, the first step taken was to stabilise or "peg" the foreign exchange rates on the important gold standard centres within narrow limits of the proposed new parity. This stabilisation *de facto*, as it is called, was achieved by the establishment of credits and the raising of loans in foreign centres, with the object of enabling the central bank of the country concerned to buy or to sell exchange as was required to keep the gold exchange rates at or near the fixed value. After some experience of the practical operation of the new parity, the position was legalised by a stabilisation *de jure*, i.e., by the passing of a law defining the new gold content of the monetary unit and thus definitely fixing its future mint parities with other countries on the same standard.

WORLD MONETARY HISTORY, 1918-1931.

We are now in a position to examine how the foregoing principles were applied in practice during the post-war stabilisation period, and

to this end we will briefly review the main features of the exchange history of the leading countries during and after the Great War.

Great Britain.—During the war years Britain, like the other belligerents, was engrossed in production, not for exchange, but for destruction. Great masses of the people were withdrawn from the fields and workshops to swell the national army, and their places were taken by women, old men and boys. All had to be clothed and fed, mainly from foreign sources, but there were few exports to pay for the imports. Consequently, as our exports dwindled, our enormous demand for raw material, for munitions and for other war supplies, both on our own behalf and on behalf of our Allies, caused our imports to increase by leaps and bounds. Our balance of *trade*, which even at the best of times is extremely unfavourable, became almost ruinously adverse. Our shipping income practically ceased by reason of the employment of our mercantile marine for war purposes. The profitable earnings of our bankers, underwriters, shippers and brokers were greatly curtailed by the disorganisation of international business, and the sterling exchanges were compelled to bear the strain of the vast payments made by Britain in her capacity of financier to the Allied cause.

Payment of the heavy sums due for goods to non-belligerent States had to be effected by any means available, i.e., by shipment of gold, or by sale of foreign securities held in this country, or by raising loans and establishing credits in the supplying State. The necessity for conserving gold led to its disuse as currency, and to the substitution of the emergency issue of Treasury notes. These, owing to the increasing demands for Government disbursements on account of war supplies, military pay and allowances, had to be issued in ever-increasing quantities. The inflation of the currency in this way, coupled with a shortage of commodities owing to reduced production and importation, combined with increased demand, caused a general rise in prices. This occasioned further currency expansion and thus the vicious circle continued: inflation, rising prices, further inflation and still higher prices.

The prevalence of high prices in this country naturally encouraged imports and discouraged such exports as we were able to make, thus accentuating the adverse trade position. Ultimately, our currency became markedly inflated, its purchasing power relative to the currencies of the so-called "neutral" countries gradually declined, and consequently the rates of exchange between those countries and London remained for several years at distinctly unfavourable levels.

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The Sterling-Dollar Rate.—Clearly transcending in importance all other rates of exchange is that between Great Britain and the United States, financially the world's strongest nation and a creditor of Britain and of other countries for enormous debits incurred mainly because of the War, when the United States Government placed dollar credits at the disposal of the Allies to finance the purchase of munitions, foodstuffs and raw materials. Further loans were made after the Armistice, and, by the end of 1920, the debt due to America reached the enormous total of \$9,635 millions, of which \$4,075 millions was owing by Great Britain. We, in turn, had made loans to the Allies amounting in all to about £1,600 millions.

The consistently adverse tendency of the dollar-sterling rate of exchange during the Great War naturally caused the greatest anxiety to financial and political leaders in this country, although the unfavourable position was all that could be expected in view of the extent of the contributory factors. America's late entrance into the War, her relatively insignificant sacrifices of both men and money, and her enormous supplies of food, raw materials, silver and munitions to the Allies at high prices, placed her in a superlatively good financial position relative to this and other belligerent nations. The external value of sterling was necessarily influenced unfavourably by the cessation of our exports, of both goods and services; by the great decrease in our investment income as a result of the sale of our holdings of American securities; and, finally, by the fact that, since the bulk of Allied financial operations with the United States, including loans, were passed through London, the dollar-sterling exchange became more than ever a New York-European rate. The adverse influence of these factors was, of course, accentuated by the fall in the purchasing power of our currency in consequence of its inflation by the issue of the inconvertible Treasury notes.

The magnitude of the burden placed on the exchange was such that it could not be dealt with by any ordinary methods. Gold was sent in large but totally inadequate quantities. But all the gold in the world would not have been sufficient to pay Europe's debts to the States; hence loans and credits of vast amount were arranged in that country by Britain and her Allies, while practically all American securities held by people in this country were requisitioned by the Treasury, and were sold as and when required in order to support the exchange.

By the adoption of these methods, the Exchange Committee in London "pegged" or stabilised the New York exchange at the rate

of $\$4.76\frac{1}{2}$ per £1, from January 6, 1916, to March 20, 1919. On the latter date control was removed, and the exchange fell away steadily and persistently, until in February, 1920, it had reached the extremely low figure of $\$3.20\frac{1}{2}$.

The Cunliffe Committee on Currency and Foreign Exchanges, 1918.

—In 1918, the financial difficulties with which the country was faced induced the Treasury to appoint a committee of bankers and business men to investigate the problems which had arisen in connection with the currency and the foreign exchanges, and to consider the powers, functions and working of the Bank of England. The most important recommendations of the Committee were, briefly: (a) The restoration of the gold standard at the earliest possible moment to lessen the handicap to industry caused by the violent fluctuations of our exchanges, and to restore the financial and commercial status of Britain as the business centre of the world. (b) The cessation of Government borrowing, so as to curtail credit expansion and the issue of uncovered Treasury notes. (c) The reduction of Government indebtedness, particularly of that portion held by the banks in the form of Treasury bills and Government securities. (d) The restoration of the free market for gold, and of the effectiveness of the discount rate of the Bank of England as the recognised machinery for preventing a drain of gold. (e) The fixing of the legal maximum fiduciary issue of Treasury notes in each year as the maximum for the following year. (This limit on the issue of Treasury notes became known as the *Cunliffe Limit*.) (f) The payment of currency notes in gold on demand in London only, and (g) The institution of arrangements whereby the Bank should be given cognisance of all exports of gold, be required to establish a central reserve of £150 millions of gold, and ultimately be given complete control of the issue of currency notes.

The Gold Standard Controversy.—The conclusions reached by the Cunliffe Committee were generally accepted, and successive Governments endeavoured to give effect to its recommendations. Nevertheless, a considerable body of expert opinion strongly opposed both the findings of the Committee and the measures adopted by the Government to give those findings practical effect. As a result, monetary opinion in this country was sharply divided into two opposing schools of thought, the *Sound Currency School* and the *Managed Currency School*.

The Sound Currency or *London School*, comprising most of our leading bankers and City men, unhesitatingly affirmed the recommendations of the Cunliffe Committee, and maintained that Britain should make every possible effort to return to the complete gold standard and, to

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that end, should restore her rate of exchange with New York to parity as soon as possible.

By this School it was maintained that the gold standard, which had functioned satisfactorily for many years before the Great War, was the best and only practical standard, as gold was the only dependable and universally acceptable medium of exchange. The gold standard, they said, had been proved to be the only system by which it was possible to ensure stable exchange rates, which they considered of vital importance to a country such as Great Britain, whose very existence depended on her international trade, involving large purchases of food and raw materials from abroad and the sale of manufactured products to other nations. They also believed that the re-adoption of the gold standard would enable London to regain her former premier position in international finance.

The Managed Currency School, on the other hand, held that stability of internal prices was of greater importance than stability of the exchanges. They accordingly advocated the adoption of a managed currency based on a *tabular standard of value*. In brief, such a scheme would involve the issue of an inconvertible currency, the value of which would be kept stable, in terms of the group of selected representative commodities forming the tabular standard, by the expansion or contraction of the note issue and by careful regulation of credit according to the needs of trade. By this method, it was maintained that, providing the management were properly conducted, the currency would always have approximately the same purchasing power, i.e., its internal value would be kept stable in terms of commodities and services.

A fuller consideration of the arguments advanced in favour of the two opposing systems is deferred to the next chapter, for the controversy has again become a matter of importance. For the present, it is sufficient to say that the views of the Sound Currency School were ultimately adopted in this country as the basis of action for the restoration of the gold standard, and that the recommendations of the Cunliffe Committee, which were eventually carried into effect, were based on the principle that the gold standard was superior to any system of currency management.

Sterling's Climb towards the Parity.—In spite of the theoretical attractions of a managed currency and in spite of the anticipated danger of our being bound to the United States by chains of gold, the Government was induced by the weight of financial opinion in this country to persist in its declared policy of restoring sterling to parity

with the dollar, and of effecting a speedy return to the essentials of the pre-war currency system.

From the record low level of \$3·20½ reached in February, 1920, the New York rate slowly recovered during the succeeding three years, until in February, 1923, it maintained an average level of approximately \$4·70. The persistent improvement was due to a number of causes.

Possibly the most important factor was the greatly enhanced credit of this country which resulted from the reduction of our expenditure and the balancing of the budget, the funding of our American debt, the improvement in our foreign trade, the progress made in re-establishing our industry and commerce, and our avowed policy of restoring the value of sterling to its pre-war level. Secondly, the great boom of 1920 was followed in this country by a severe fall in prices (largely a result of the deflationary operation of the Cunliffe Limit), which contrasted with the tendency of prices in the United States either to decline more slowly or at certain periods even to rise. In the third place, the demand for dollars was considerably lessened in consequence of our greatly diminished imports from the States, while, on the other hand, supplies of dollars in the exchange market were increased as a result of the large loans made by the States to Norway, Holland, Chile, Brazil, the Argentine and other countries.

From February, 1923, until July, 1924, however, political and financial uncertainty were responsible for a reaction, and the value of sterling in terms of dollars gradually declined until at the latter date all the headway made in the preceding twelve months had been lost.

Britain's Return to Gold.—The later months of 1924 witnessed a further complete change. The fears regarding our political and financial position proved to be unfounded, and, in spite of the usual autumnal demand for dollars, the sterling rate rapidly improved, until in the early months of 1925 it had so nearly reached the parity that the return of this country to gold at last became possible.

By the Gold Standard Act, 1925, provision was made, as we have seen (*ante*, page 347), for the establishment of our currency on a *gold bullion standard*, on the same legal basis as had prevailed for many years before the War but with the exception that gold coins were not to be used for internal purposes.

In the light of later experience, there can be no doubt that our return to gold at the pre-war parity, if not entirely mistaken, was at least unduly precipitous. The forcing up of the exchange value of sterling, preparatory to the return to gold, was in part at least effected

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by attracting short-term funds to London by raising interest rates here above the level in New York. In consequence the exchange value of sterling was hoisted to an artificial level which did not truly reflect the purchasing power parity. There is no doubt that, in 1925, an exchange basis of \$4.8665 per £1 considerably overvalued sterling, having regard to our internal price level, with the result that our export trades, on which our prosperity so largely depended, were severely handicapped, and that the large volume of unemployment, with which the nation had been left in consequence of the Great War, was markedly increased. Theoretically, the divergence between the internal and external values of sterling should have disappeared as economic forces brought about a fall in our price level, but in fact this adjustment was delayed because the world price level was at the same time gradually and persistently falling, and because the inflow of foreign funds to London outweighed the factors which would normally have caused sterling to depreciate.

In spite of this enormous handicap, Britain managed to maintain the gold standard for six years, although there cannot now be any doubt that she was able to do so only at the cost of vast real sacrifices, as was indicated by the fact that there were at times serious losses of gold to the United States, and, later, to France, which naturally forced interest rates in this country to high levels and so placed a heavy burden on industry. Ultimately, as is explained in the next chapter, the forces operating against our retention of the gold standard proved too great for us, so, in 1931, we were forced to abandon that standard and give up the convertibility of our currency. However much we may pride ourselves on our action of 1925 as a gesture of financial integrity, we cannot deny that it was a gesture that ultimately failed in its purpose, and we may well question whether so many years of sacrifice were justified.

The Exchanges with Australia, New Zealand and South Africa.—The Dominions have in recent years experienced considerable difficulty with their exchanges, mainly because of the great fluctuations which have taken place in their balance of indebtedness on international account. In 1919–20, for example, Australia's balance of *trade* was not less than £42,000,000 in her favour, whereas in the following year she actually had an adverse balance of over £9,000,000, a difference of £51,000,000 in two successive years.

Naturally such violent changes placed an enormous strain on the resources of the few banks responsible for the transfer of funds to and from the Dominions, and in view of the figures quoted it is not surpris-

ing to find that the Australian exchange mechanism did, in fact, break down entirely in 1922. In the later months of 1924 also the difficulties were considerable, the premium on remittances to Australia rising to as much as 70s. %, and causing much dissatisfaction amongst importers in this country, who were inclined to blame the banks for the prevalence of such high rates.

The difficulties relative to the Australian exchange after the War were considerably intensified by the heavy and persistent borrowings of the Commonwealth in this country. Thus a great deal of anxiety was felt in 1924 by the fact that in the ten previous years Australia had borrowed no less than £130,000,000 from the London Market. Loans of such magnitude necessarily involved a considerable addition to the spending power of a community numbering little more than six million persons, and consequently there was an appreciable increase in the demands made on the resources of the banks. As, however, the banks in Australia could not meet demands upon them for currency or for accommodation against funds to their credit in *London*, the exchange problem was greatly accentuated by the very real difficulties resulting from a shortage of currency.

Fortunately full cognisance of the facts was taken by the Government, and many of the difficulties were removed by the passing of the Commonwealth Bank Act, 1924. This placed the sole control of Australian note issues in the hands of the Commonwealth Bank, which was authorised to issue notes against a gold reserve of 25 %, part of which can be kept in the form of funds to its credit in *London*. By careful manipulation of its credit balances in *London*, the Bank is normally able to meet the seasonal demand for currency resulting from the movement of the wool and wheat crops without disorganising the exchange and currency systems, and without imposing an additional burden on the trading community in the form of heavy charges for remittances and discounts.

The fall in world prices since 1930 seriously affected the economic position of Australia, as of every country producing primary commodities. She suffered a heavy decline in the value of her exports, while her imports, consisting mainly of manufactured goods, were not correspondingly reduced, and her heavy external debt payments were not, of course, reduced at all. Unfortunately, it was impossible for Australia to obtain further loans abroad, partly because of the general collapse of stock markets and, in particular, because of the unsound financial policy of her Labour Government then in power. The refusal of the Labour Party to consider a reduction in wages also made

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it difficult for Australia to reduce her costs and so compete more effectively in world markets.

The position at one time became so serious that the banks were compelled to "ration" remittances to London to prevent the exhaustion of their balances in that centre; and the Federal Government was compelled to come to the rescue of New South Wales, which had defaulted in its debt payment. Matters improved somewhat following the shipment of large quantities of gold to London and the establishment of an "exchange pool" by the Australian banks; but sterling is still, at the time of writing, at a premium of 25 % in Australia.

Similar difficulties were experienced by New Zealand, and in 1933 that country *deliberately* depreciated the exchange value of her currency in order to stimulate her exports and so improve the position of her industries.

The Union of South Africa was in a sounder position, and through the critical period of 1929 and 1930 managed to keep her exchanges approximately at par with sterling. When Great Britain abandoned the gold standard, the South African pound naturally appreciated in terms of sterling, and the Union suffered by the fall in the gold values of her exports, though this disadvantage has since been partly offset by the great rise in the commodity value of South Africa's gold exports. Her abandonment of the gold standard in 1933, though dictated rather by policy than by necessity, was largely decided upon because of the difficulties which hampered her exporters of commodities other than gold.

The Neutral Exchanges.—Under this heading are included the exchanges between London and Switzerland, Holland, Scandinavia and Spain, all of which countries were intimately affected by the conflict which raged around them, mainly because they supplied the belligerent States with food and raw materials. The sterling exchanges with neutral countries had to bear the brunt of vast payments on behalf of the British Empire and its Allies, and there was practically no means of meeting those payments other than by raising loans and establishing credits against the British Government's guarantee. During and for some years after the War, therefore, the strength of the guilder, the Swiss franc and the Swedish krona was a noteworthy feature of the London Foreign Exchange Market.

So far as Holland is concerned, the part played by the guilder in European financial operations—largely owing to the proximity of Holland to Germany—gave that currency and also the Amsterdam Money Market a position of considerable importance, and the demand

for guilders in subsequent years to finance large shipments of rubber, sugar and other products from the Far East tended to maintain it at a premium relative to sterling.

The sterling value of the Swiss franc also held steadily against this country for several years after the War, chiefly owing to the diversion to Switzerland of capital from other countries whose currencies were depreciating, and to the persistent demand for Swiss currency on the part of foreign tourists. In 1929 Switzerland adopted the gold exchange standard, but replaced this with a gold bullion standard upon the establishment of the Bank for International Settlements in 1930 (see page 445).

The stabilisation of the Swedish krona on a dollar basis necessarily maintained that currency at a premium in terms of sterling so long as the New York rate was against us. The result of stabilisation in Sweden, according to Professor Cassel,* was "a most violent economic crisis, which annihilated the fortunes of a great many people, exposed the banks to serious difficulties and for a time paralysed the industry of the country." Nevertheless, "Sweden reaped the fruits of its determination and its sacrifice, the economic life of the country started again on the new gold basis, and in the next few years comparatively great prosperity was reached". In 1931, Sweden's close business ties with Britain caused her to follow sterling off the gold standard.

Our exchanges with Norway and Denmark, which remained consistently unfavourable during the war period, thereafter rose to the pre-war parity. As was only to be expected, these countries experienced a violent reaction after the War and post-war boom, and the disorganisation of their economic structure naturally had its effect on their currency and exchange, while speculative activity—especially in foreign exchange—proved so detrimental to business conditions that it had to be curbed either by State restriction or by co-operation on the part of the banks.

The position in Norway was not improved by internal labour troubles and banking difficulties. Nevertheless, the active deflationary policy of the Bank of Norway and the improved trade position gradually brought into being conditions of greater stability, ultimately permitting Norway to establish a gold bullion standard, which was maintained successfully until its suspension in 1931.

The Government of Denmark, by undertaking an active policy of deflation and by supporting the exchange with extensive credits in New York, successfully stabilised the crown on the basis of the U.S.

* *Post-War Monetary Stabilisation*, p. 18.

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dollar, with the result that, as from 1st January, 1927, Denmark was able to re-establish the gold standard and remove the restrictions on gold exports. This position continued until 1931 when Denmark followed Britain's lead and suspended the gold standard.

Spain was affected in much the same way as Norway and Denmark, but the depreciation of the peseta was intensified by the unsatisfactory political conditions in Spain, and by the disturbance of Spanish credit in consequence of frequent political disorders and of the drain on the National Exchequer to meet the cost of the war against Morocco. Speculation in foreign exchange has had a particularly detrimental effect on the value of this currency, and political disturbances have accentuated the position. Various tentative efforts have been made towards *de facto* stabilisation, but no successful scheme has yet been devised.

The Exchanges of our European Allies.—Under this heading are included the rates between this country and her chief Allies in the Great War, viz., France, Russia, Belgium and Italy.

The economic structure of our European Allies was thoroughly disorganised in consequence of the War, the adverse effects of which upon their currency and upon their finances generally were clearly indicated by the extent to which their exchanges with Britain and the United States became depreciated. The principal reasons for the movement of their exchange rates in favour of this country may be briefly reviewed. We financed them during the War, supplied them with food, raw materials and munitions, made their purchases and settled their debts in other countries. Their exports almost entirely ceased, and as a result of the devastation and destruction of the War, they could make only slow progress in re-establishing production. Their currencies were enormously inflated by the issue of inconvertible notes. Their monetary units became depreciated, and coins of gold and silver entirely disappeared from circulation. Gold exports were generally prohibited, or even where allowed, were totally inadequate to correct the exchanges. Finally, their financial position was seriously jeopardised because they made no real effort to balance their budgetary position.

During the War there were, of course, no exchange rates with Belgium, as most of that country was under German occupation. The rates with France and Italy, however, were still quoted, and were prevented from showing any undue depreciation by rigid control of the exchanges.

After the War, however, inflation continued in France and Italy,

whilst it also occurred in Belgium, so that the values of the currencies of all three countries markedly depreciated. Unhappily, speculation in these currencies caused the falls in their values to be much more pronounced than might otherwise have been the case, as also did the so-called "flights from the currency" which from time to time took place, when both foreigners and nationals of the country concerned converted their holdings of the currency into some more stable currency, e.g., dollars or pounds. Such a "flight" was particularly pronounced in the case of the French franc.

For a time the Belgian franc tended to move with the French franc, as the fortunes of the two countries seemed insolubly blended. But Belgium's finances proved to be in a more healthy position than those of France, and the action of the Belgian Government in checking speculation and in supporting the exchange, together with the improvement in the country's trading position, made possible a reorganisation of the currency in 1926. In October of that year Belgium, having arranged extensive credits with foreign central banks to support her exchange, devalued her currency by instituting for external purposes a new unit known as the *belga*, which was made equal to five Belgian francs, the new parity being fixed at Belgas 35 = £1. The franc continued to be used as the *internal* currency unit, and the circulating currency was made convertible on demand into gold exchange, i.e., a gold exchange standard was instituted. Later, in February, 1927, a free gold market was established, and in August, 1930, Belgium followed this up by instituting a gold bullion standard, which she has maintained up to the present time.

The example of Belgium was soon followed by Italy, where the Fascist Government had succeeded in winning confidence in its ability and determination to re-establish the fortunes of the country. As a result, the exchange rose from 140 lire per £1 by August, 1926, and reached 90 lire per £1 by May, 1927. The Government then announced its intention to peg the exchange around that level, and gradually internal prices fell until they were roughly in accord with the exchange quotation. The lira was finally stabilised at a parity of 92·46 per £1, foreign credits being used to help to maintain its value over the initial stabilisation period.

At about the same time, France made serious efforts to tackle her currency problem. In July, 1926, a Coalition Government under M. Poincaré was formed, and, following energetic measures to improve the exchange position, the London-Paris rate fell from 250 on 20th July to 170 by mid-August, at about which figure it remained until October.

Action was then taken to force up the value of the currency still further, and proved so successful that, by the middle of December, 1926, the value of the franc had risen to Fcs. 120 per £1.

Throughout 1927 and the first six months of 1928, the French Government pegged the exchange at about 124 to the £. During the same period expenditure was decreased, the budget was balanced and the amount of floating debt was much reduced. As a result, the Government in June, 1928, found it possible to convert the *de facto* stabilisation into stabilisation *de jure*; a gold bullion standard was established, and the franc was given a new mint parity of Fcs. 124·21 per £1.

Each of these three countries has maintained the gold standard through the difficult years of 1931-34, and they constitute, with France as the leader, and Holland and Switzerland as stalwart supporters, the chief members of the so-called Continental "*gold bloc*" (see page 473) which has shown its determination to maintain the gold standard at all costs.

The vast social and political upheaval in Russia not unnaturally left a permanent mark upon her financial organisation. The methods of the revolutionary Governments in repudiating foreign loans and earlier currency issues led to a complete collapse of Russian credit in other countries. Trading relations with foreign States consequently became quite impossible, and exchange rates with Russia were practically non-existent for several years.

Later, however, active steps were taken by the Soviet Government to improve the economic position of the country, and in 1924 a new unit of currency—the *tchervonetz* (plural *tchervontzi*)—was introduced, and all former currencies were repudiated. This new currency is not convertible into gold, but by stringent Government control, not only of the exchanges but also of all foreign trade, its value has been successfully maintained at the nominal parity of Tch. 945·8 per £1,000.

The Eastern Exchanges.—*India and China.*—The recent history of the currency and exchange of India and China is dealt with in Chapter XVIII, to which the reader is referred.

Japan.—For a considerable period during and after the Great War the favourable position of Japanese trade was reflected in the appreciable premium on the yen in terms of sterling. After the disastrous earthquake of 1923, however, conditions inclined in the other direction, and for some years the exchange continued to bear witness to the ruinous nature of the catastrophe, to the consequent great decrease in the export trade and the vast addition to imports,

and, in general, to the great difficulties which had to be faced by the Japanese people during the period of reconstruction. Ultimately, Japan succeeded in 1930 in returning to a gold exchange standard at the old parity, and subsequently was able to institute the gold bullion standard. Unfortunately, she suffered so severely from the depression of 1930-31 that she was compelled to suspend the gold standard, and since that time the value of her currency has depreciated considerably, even in terms of sterling. It is generally agreed, however, that the depreciation of the yen is, to some extent at least, attributable to direct manipulation by the Government, with a view to assisting Japanese exporters in their onslaught on world markets.

The South American Exchanges.—During the Great War, the exchanges with the principal South American countries were generally much in their favour, largely in consequence of the extent to which Britain and her Allies were compelled to rely upon these countries for supplies of food and raw materials. In more recent years, however, the unsatisfactory financial and political conditions in the South American republics and the severe fall in the world price of the foodstuffs and raw materials constituting important South American exports have been reflected in widespread fluctuations of their exchange rates and in the considerable depreciation of their currencies.

In Brazil the currency and exchange position became so unsatisfactory that, after investigation by the Montagu Commission, it was decided to devalue the currency and to base it on a new unit, the cruzeiro; but the scheme has never been carried through. Chile also was compelled to devalue, but Argentina and Uruguay were for a time more fortunate. Argentina, in particular, prospered exceedingly in the years before 1931, and was able to maintain the gold bullion standard on the pre-war currency basis. Since 1931, however, she has suffered in much the same way as other primary producing countries, and, like all the other South American countries, has been compelled to suspend gold exports and resort to a variety of devices with a view to regulating her exchange position (see page 604).

The Exchanges of the Ex-Enemy Nations.—It is only to be expected that, as the Allied finances and exchanges were so disorganised by the War, the exchanges of our late enemies should have been completely disorganised. Apart from the enormous strain imposed upon the economic resources of Germany, Austria-Hungary, Turkey and Bulgaria by the actual pursuit of the War, their final defeat by the Allies and the extent of the Allied demands for reparation payments resulted in a complete collapse of their credit in other countries.

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The situation in Germany and Austria-Hungary was still further disturbed by internal political disorder, ending in the establishment of a republic in the case of Germany and in the disintegration of the Austro-Hungarian dual monarchy into several independent States. The internal financial and political difficulties naturally affected the exchanges between these countries and other nations, the rates fluctuating in a manner which could scarcely have been dreamt of by the most imaginative operator.

Austria.—Although the Austrian krone depreciated to remarkably low levels, its collapse was by no means as absolute as was that of the German mark. In fact, largely as a result of the efforts of the League of Nations, Austria was able to make a remarkable recovery, and it was found possible to stabilise her exchange for a considerable period in the neighbourhood of 310,000 kronen per £1 (actually 70,000 kronen to 1 gold U.S. dollar). The success of this measure led to the institution in 1925 of a new currency unit the *schilling*—which was based on gold and made equivalent for exchange purposes to 10,000 paper kronen. A similar reconstruction took place in the case of Hungary (see page 598).

In May 1934, the schilling was devalued at the rate of 128 new schillings to 100 old ones, thereby legalising a state of affairs which had existed for over a year. The operation resulted in a considerable profit to the central bank, from the revaluation of its gold reserves, which was used largely to finance the banking reconstruction then in progress. The effect of the devaluation was also expected to show itself in an improvement in the country's trading position.

Czecho-Slovakia.—The remarkably strong position maintained by the new State of Czecho-Slovakia ever since its formation is in distinct contrast to the unsatisfactory conditions existing in other divisions of the old Austro-Hungarian Empire. To a great extent this is due to the essentially industrial and commercial character of the new State, but it is also attributable in no small degree to the courageous policy adopted by the Government in balancing its Budget and in refusing to water down its currency. After being maintained for a long period within close limits of fixed parities with the gold currencies, the monetary unit was devalued in 1929 to the equivalent of 164·25½ per £1. Following the crisis of 1931, the departure of Britain and other countries from the gold standard tended to have prejudicial effects on the trading position of Czecho-Slovakia and induced her in 1934 to devalue the crown by one-sixth, making the mint parity with sterling Kr. 191·625 per £1. This devaluation, like that carried out by Austria

(see above), was designed to enable Czecho-Slovakian exporters to compete more readily with other countries.

Germany.—In Germany, as in France, the full effects of inflation were not reflected in the exchange quotation until after the end of the War. The inflation was, however, very considerable. The Government financed its expenditure largely by the issue of Treasury bills, and by September, 1918, it was calculated that 99 per cent. of the Reichsbank's bill holdings consisted of Treasury bills, against which it issued notes.

After the War had ended, the value of the mark fell rapidly, mainly owing to vast increases in the note issue. The dangers of an unregulated note issue were not appreciated, the current view being that, as there was a scarcity of money, due to its low value, the correct procedure was to issue more, which, of course, further reduced its value. Moreover, the Reichsbank was averse from increasing its discount rate, and this remained at 5 % until July, 1922.

An unbalanced Budget contributed to the inflation, although itself largely due to the inflation, for while the value of the currency was falling, the real value of tax receipts inevitably fell below the estimates. So long as the Allies demanded fresh payments of Reparations* which could not be met from taxation, it was, in any case, impossible to balance the Budget. Thus the Allied demands for payments in May, 1921, June, 1922, and April, 1923, each terminated periods of relative stability in the value of the mark.

From January until April, 1923, that value had been kept fairly stable by sales of foreign currency coupled with a rationing of foreign exchange purchases. This policy was continued until October, 1923, but without success, as it merely led to the depletion of the Reichsbank's gold holdings. The depreciation was increased by enormous sales of marks by Germans who had lost confidence in the currency, and also by widespread speculation in the leading foreign exchange markets.

Futile attempts were made by legislation to prevent speculation, but none of the remedies touched the causes of the fall, and they therefore proved ineffective. The final collapse was caused by the occupation of the Ruhr area by the French in 1923, in consequence of Germany's failure to meet the reparation payments due in that year.

The result of these factors was that, by the end of 1923, the mark

* The reparation payments were the payments which Germany and her Allies were bound by the Treaty of Versailles to pay as a war indemnity chiefly to France, Belgium, Italy, the United States and Great Britain.

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had become utterly valueless, the rate of exchange between London and Berlin being at one period quoted in terms of *billions* of marks to the £. The "flight from the mark" was far more ruinous and certainly far more spectacular than the flight from the franc.

After the degeneration of the pre-war mark into a valueless unit, attempts were made with international assistance to establish Germany's finances on an improved footing. The reorganisation of the currency proceeded by two stages. In the first place, the *rentenmark*, an inconvertible note equivalent to one billion paper marks, was issued for internal use. The devaluation of a currency in the ratio of 1,000,000,000,000 to 1 is no doubt the most remarkable case of its kind in history, but the value of the new unit, which was based on the gold dollar, was maintained with considerable success.

In 1924, the establishment of the German Gold Discount Bank, the adoption of the recommendations of the famous Dawes Report in regard to the war debts and reparation payments due by Germany, and the successful flotation of a large international gold loan, enabled Germany to take the second step of abolishing her old paper mark and the *rentenmark*, and of replacing them by the gold *reichsmark* as the unit of currency. The new unit, which for conversion purposes was made equal to the *rentenmark*, was for some time artificially maintained at par with the United States dollar, and later a gold bullion standard was adopted.

The subsequent history of Germany's finances is insolubly bound up with the question of reparations. Time and again her exchange position was threatened with collapse by reason of the enormous transfers of funds which she was expected to make in payment of interest and principal of her foreign loans and of the reparations due to the Allies. Unfortunately, too, Germany's internal position was far from sound. The inflationary period, during which the undervaluation of the mark had unhealthily stimulated German industries, had left a legacy of over-capitalisation and inflated productive capacity. Now that credit had been contracted, industrialists suffered severely, and there were many bankruptcies. But there is little doubt that, had it not been for the burden of reparations, Germany would have been able to re-establish her industrial as well as her financial machinery.

As it was, Germany had continually to raise loans abroad (largely in America) in order to obtain the foreign currencies out of which to meet the demands of her creditors. During the period 1927-28 it became only too clear that some modification of the Dawes Plan was

essential. Germany was experiencing increasing difficulty in collecting funds for the reparation and other payments which she was required to make, and it was obvious that her finances could never be safely re-established if she continued to meet her obligations by borrowing abroad more than her economic structure could properly and conveniently afford.

Early in 1929, a special committee of experts was appointed by the interested countries to examine the position, and as a result of their deliberations the "Young Plan" was formulated, providing for a considerable reduction in the total amount which Germany had to pay and introducing necessary modifications into the arrangements by which those payments were to be effected. Even this Plan proved unworkable, however, and in 1931 Germany was compelled to suspend reparation payments (see page 457).

The Bank for International Settlements.—The most successful provision in the Young Plan was that providing for the establishment of the Bank for International Settlements. This Bank took over the duties of the Agent-General for Reparations, established under the Dawes Scheme, and the discharge of his functions in connection with the reparation payments from Germany. It was not intended, however, that the Bank should be terminated when these duties (obviously of a temporary nature) came to an end; it was to become a permanent institution in international finance. With this object in view, the Bank was empowered to conduct banking and commercial operations, and to act as banker for the world's central banks.

Unlike the relations between a central bank and other banks in the same country, the relations between the International Bank and the world's leading central banks are reciprocal. The International Bank may not only keep gold deposits on account of central banks but may also deposit gold with them. It may re-discount bills held by central banks and it may have its own bills re-discounted by them. It may open and maintain current or deposit accounts either *for* central banks or *with* central banks, and it may act as agent or correspondent for any central bank and appoint any central bank to act as its agent or correspondent.

In addition, the Bank may buy and sell gold coin or bullion, exchange, or negotiable securities, for its own account or for the account of central banks; it may lend to or borrow from central banks against gold, bills of exchange and other short-term obligations of prime liquidity or other approved securities. Subject to the consent of the central banks affected, it may deal with private individuals

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also, but, in practice, this concession is not likely to be very effective. On the other hand, the Bank may not issue notes, accept bills of exchange, make advances to Governments or open current accounts in their name, acquire a predominant interest in any business concern or remain the owner of any real property except in so far as it is required for its own business.

The International Bank is not intended to interfere with the national independence and influence of central banks in their own markets, and to obviate the possibility of such competition the central banks may veto any operation in their currency or on their territory which is likely to involve the withdrawal of funds invested in the country.

Provisions as to the actual reserve to be maintained by the Bank are omitted from the statutes, but the Bank must hold assets appropriate to the maturity and character of its liabilities.

An important prospect is that the Bank will obviate, or at any rate considerably lessen, the need for the international movement of gold by substituting therefor transfers between the accounts of the central banks in its books. Current balances of the central banks concerned will indicate the state of international indebtedness, while depleted balances will be restored by the operation of re-discounting commercial bills and depositing approved securities. Thus the outcome of the institution of the international bank should be greater stability of the world's credit structure, with ultimate advantage to the whole field of international trade and finance.

That this prospect is being fulfilled is indicated by the annual reports of the Bank. These show that, since its establishment at Basle in 1930, the Bank has made very rapid progress, and that it has already come to be an integral part of the world's machinery of international finance. It has received large deposits from central banks and for various Government Treasuries, on whose behalf it makes payments abroad. The growing practice of central banks of keeping a part of their foreign reserves with the Bank has permitted the development of transfer operations from bank to bank, by the simple method of book debits and credits in the accounts of the Bank, thus avoiding the disturbance which would otherwise be caused by "special" operations in the foreign exchange markets. The development of clearing operations and the elimination of needless gold movements are gradually being developed.

With the cessation of reparation payments, the Bank's functions as an agent of transfer have lapsed, but its status has by no means

been impaired, as it can now concentrate on its more important functions of promoting central bank co-operation and facilities for international finance. Its resources have, nevertheless, been seriously diminished, not only on account of the lapse of reparations but also because an unfortunate restriction in its statutes prohibits it from working "for its own account" with currencies which are *not* based on gold or gold exchange. In consequence, the abandonment of the gold standard by all but a few countries has had the effect of seriously restricting the Bank's activities, and this effect has been accentuated by the practical disappearance of any effective gold standard exchange and the tendency of central banks to convert their foreign exchange assets into *gold*. The restriction cannot be removed without a modification of the Bank's statutes, but as representatives of the European gold countries wield the greatest amount of power in the Bank's councils, it appears unlikely that any such change will come about in the near future.

Nevertheless, there is evidence that the Bank is taking an important part in European reconstruction, and, since the crisis of 1931, it has granted assistance to and arranged loans for several distressed European countries. Further, the control of the Bank is in the hands of representatives of the leading central banks of the world, and their meetings provide excellent opportunities for the discussion of world monetary problems and the formulation of schemes of co-operation such as have never existed before. It is likely that co-ordination of central banking policy will be of the utmost importance in the future, and in view of the many problems whose solution requires international consultation, the Bank for International Settlements is likely to maintain its sphere of usefulness.

CHAPTER XX

THE WORLD CRISIS AND THE PROBLEM OF THE GOLD STANDARD

THE causes of the depression which has prevailed since the autumn of 1929 are naturally complicated, but there is little doubt that the world's difficulties have been mainly due to the great changes which, in the last two decades, have taken place in the organisation of the production and the distribution of goods, and in the effective supply of money.

The Changed Face of Production.---To understand the changes in production it is necessary to go back to the conditions of the Great War. The War led to a vast re-shuffling of national and of international production. Whilst in several countries many new industries came into being and some old-established industries were greatly extended, many existing industries were badly disorganised. In those industries which were important for war purposes the effect of expansion and of great improvements in technical efficiency was to increase their productive capacity far beyond normal peace-time requirements.

Viewing the world as a whole, there was a marked change in the geographical distribution of industries: there was a vast expansion in the production of raw materials in some countries, and a wide re-distribution of manufacturing industries in others. Many countries (notably Japan, India and the Dominions), which had previously relied on the industrial countries (such as the United Kingdom, Germany and France) for their supplies of manufactured goods, found their supplies cut off, and so began to undertake the production of these goods themselves. By the end of the War, manufacturing industries were flourishing where formerly they had been almost non-existent. When peace was declared, factories were converted from munition to industrial uses and the demobilised armies were re-absorbed into the ranks of productive labour. There followed a period of industrial activity whilst the different countries sought to

repair the damages of war and to satisfy needs which had necessarily been postponed during the War.

Unfortunately, the period of activity was short-lived. The boom, which reached its peak in 1920, was built on an unsound basis of inflated currencies and abnormal demand for goods. Very soon the increased demand which was a feature of the transition from war to peace conditions was satisfied, and the institution of a deflationary policy in this and other countries, together with the attempts of Governments to dispose of surplus war materials, led to a break in prices. In 1920-21 the boom collapsed.

Then followed a period of depression, out of which the world gradually emerged during the years 1922-25. This period witnessed a gradual recovery of production in Europe accompanied by a rapid expansion in other parts of the world which had not suffered so severely from the war-time dislocation. The period may be regarded as a time of reconstruction and adjustment, during which the economic system endeavoured to adapt itself to the new conditions.

Gradually, confidence returned. The evacuation of the Ruhr and the acceptance of the Dawes Plan in 1924, the settlement of war debts, the stabilisation of many inflated currencies, the financial reconstruction of several Central European countries, and the return to the gold standard in Great Britain, together with an improvement in the general political situation, all assisted in creating a spirit of optimism. An abnormally good harvest in 1925 helped to make that year a turning point.

From 1925 until 1929, world trade gradually expanded. In most countries a fair level of prosperity developed as one by one the important trading nations struggled back to sound currency conditions. By the middle of 1928, most countries which had been involved in monetary difficulties had succeeded in stabilising their currencies. Their exchanges were functioning with a freedom from fluctuations that bore comparison with the stable conditions of pre-war days. The gold standard had been generally restored, and, with it, confidence in those countries that had returned to gold. International investment had been revived, and international trade had been freed of the risks engendered by fluctuating exchanges.

But the revival was inherently unsound, for there was a lack of harmony between world capital movements and world trade.

Dislocation of International Finance.—The main defect in the financial mechanism arose from the fact that, as a result of the War, the balance of international indebtedness had been completely changed.

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Before the War, Britain was the world's largest creditor, receiving on balance some £100 millions each year from our overseas activities. This balance we had been accustomed to re-invest in foreign countries, as the rules of the gold standard demanded, and, by so doing, we had kept our international debits and credits in a state of equilibrium and also permitted the gold standard to function freely throughout the world.

In consequence of the Great War the United States and France took an important place as world creditor nations. During the War vast sums had been borrowed by Great Britain from the United States and had been largely re-lent by us to our Allies, whilst after the War the Reparations Agreement required the vanquished countries to pay huge sums by way of indemnity to France, Great Britain and the other victors. But the new creditor countries, instead of helping their debtors to pay in goods (the only way in which international debts can ultimately be paid), closed their markets by raising high tariffs.

In another respect, too, the creditor nations failed in their functions. It is true that the United States lent considerable sums abroad, in particular to Germany; but the loans of this period differed markedly from those which we, as the world's greatest creditor, had made in pre-war years. Our pre-war loans were made at long term, largely to "new" countries for purposes of development, and that development, as it proceeded, provided us with interest and with repayment when it was due. The post-war loans, a considerable portion of which were short term, were made largely to the "old" countries of Europe which had been impoverished during the War, and which had large war debt or reparation payments to make. They were used mainly for the purpose of enabling borrowers to defer payment of their accruing obligations, instead of promoting new industries and developing new areas.

Largely as a result of the tariff policy of the United States, gold flowed in enormous quantities to New York, but it was not allowed to bring about a commensurate rise in prices—the automatic adjustment provided by the gold standard. Instead, the gold was largely *sterilised*, i.e., prevented from forming the basis of additional currency and credit, so that, while the United States were sitting on mountains of gold, the growing scarcity of the metal in the world outside led to a severe contraction of currency and credit, with its inevitable results—a fall in the world price level, and the imposition of a heavier burden than ever on the debtor countries.

For a time the loans made by the United States and Great Britain to the debtor countries had the effect of stimulating business activity.

But, unfortunately, in many countries the increase in activity led, as it had led so many times before, to over-confidence and disastrous speculation. Towards the end of 1928 boom conditions prevailed in several countries, particularly in the United States, where the banks unwisely participated in financing real estate and stock market operations, so promoting a speculative boom which far out-paced the improvement in industry. On Wall Street, stocks and shares soared high above their true values, even the most reputable houses vastly extended their commitments, and interest rates reached extravagant heights.

Unbalanced Production.—The trade position was no more sound than the financial structure. Although productive activity in the years 1925-28 was gradually expanding, the expansion was not balanced by a proportionate extension in the *demand* for goods. During these years competition became exceedingly fierce, and, in an attempt to regain lost markets and to hold their own in world markets, producers resorted to *rationalisation*—a system involving the re-organisation of industry on the most economic and scientific lines with a view to avoiding overlapping and waste. The result of rationalisation, invariably implying amalgamation of existing units and the introduction of labour-saving machinery, meant a reduction in the demand for labour, so that, while industrial and agricultural productivity increased enormously, there was no corresponding increase in the demand for consumers' goods.

Another important cause of the maladjustment between production and consumption was the relatively small advance in the standard of living. True, that standard did improve, but it did not advance as much as was warranted by the growth of productive power. Though there was a marked rise in the demand for certain "luxuries", the increase in the demand for commodities *in general* was nothing like adequate to cope with the supply, especially as most of the increased productive power went to swell the capacity of *existing* industries, for whose products the demand was limited.

These conditions were such as are usually associated with the later phases of a trade cycle. But, owing to the re-distribution of production which had occurred during the War, the process was on a larger scale than that of any earlier trade cycle. Moreover, the maladjustment of production and consumption was increased by disparities in the price levels in various countries arising out of the war-time inflation, and by the still worse effects of divergent national currency and tariff policies.

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The question of tariffs became of increasing importance as the years wore on. The War left in its wake a legacy of trade restrictions, and in the years following the War, the general tendency was for further restrictions to be imposed. Attempts were made to reach international agreement with a view to removing some of the restrictions, but the most that was achieved was a temporary halt in the process of tariff-building, largely due to the efforts of the Economic Consultative Committee set up by the World Economic Conference in 1927. The enormous growth of trade restrictions had the effect of perpetuating and accentuating the geographical maldistribution of production which arose as a result of the War.

The Slump of 1929.—The growing disparity between production and consumption exercised a steady downward drag on world prices, and this tendency was accentuated by the sterilisation policy of the United States and by the flow of gold from the debtor countries.

With the fall in prices, profit margins were reduced and in many cases disappeared, producers lost confidence, and the trade boom collapsed. In this country the loss of confidence resulted in a slump on the Stock Exchange in the summer of 1929 and this was followed a few months later by a far more devastating crash on Wall Street which involved thousands in ruin.

In Germany, conditions had been going from bad to worse. She had found it increasingly difficult to meet her reparation payments, even by dint of continuous borrowing. But this resort failed her in 1928, when American investors found it more profitable to use their money at home. For a time collapse was staved off by the Young Plan of 1929, which mobilised part of Germany's liabilities by converting them into long-dated bonds which were taken up by investors in this and other countries. But this settlement proved as impermanent as the Dawes Plan of 1924, and Germany rapidly drifted towards bankruptcy.

As we shall see later, the final collapse came in 1931, but during the preceding two years, 1929-30, conditions throughout Europe grew steadily worse. One country after another fell into the throes of depression as the hard-won confidence of 1928 melted away, and by 1932 the world was involved in a slump of unprecedented dimensions.

The Growth of Economic Nationalism.—The fall in prices which had begun in 1928 had continued unabated and every country was glutted with unsaleable products. These excess stocks led to a furious struggle for markets. Competition was intensified in every direction. We in this country found competitors where formerly we had found

customers, and we found, too, that our trade rivals were under-selling us almost everywhere. In other directions, important markets for our goods were being closed because of the financial and political difficulties of the buying countries, or because other countries, faced with the necessity of maintaining a favourable trade balance and of protecting their industries (in some cases but newly established), raised tariff barriers against foreign competition.

Everywhere there was an extension of the spirit of *economic nationalism* which had grown originally from the War. In many countries, too, currencies were depreciated and exchange transactions were restricted in an attempt to protect the home market and to encourage exports. Nations vied with each other in a disastrous policy of seeking to remedy their trade position by increasing existing tariffs or imposing new ones. Each country sought to sell as much as possible of its own goods abroad, whilst at the same time trying to buy as little as possible from other countries. Little thought was given to the fact that goods and services sold to other nations cannot in the long run be paid for except in the form of other goods and services.

In the result, this protectionist policy had the opposite effect to that which was intended. Tariffs, when adopted by one or two countries, *may* prove beneficial to them in assisting them to develop their own industries; but, when universally adopted, *tariffs must result in a contraction of world trade*. So, just at a time when all nations needed nothing so much as an expansion of trade, their economic policies had just the opposite effect. International trade was completely throttled and the figures of unemployment in most countries reached colossal heights.

Great Britain. Quite apart from sharing in the world depression, Britain had her own special difficulties. Two factors, in particular, were largely responsible for the financial troubles which culminated in our suspension of the gold standard in September, 1931. These were: (a) an adverse change in our international *trading* position; and (b) a similar change in our *lending* position.

OUR CHANGED BALANCE OF PAYMENTS.—In spite of the decline in our exports after our return to gold in 1925, and in spite of the vast sums which we had to pay the United States, we were able to maintain a large favourable balance on our international account for each year up to 1929 (see page 285). From that year, however, our favourable balance of payments dwindled away. For 1930, it was only £28 millions as against £103 millions in the previous year, while the figures

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for 1931 revealed an even more serious position—an adverse balance of £104 millions. The reasons for this were that our overseas income (i.e., our *credits*) had fallen badly, whilst, on the other side of the account, our expenditure abroad (i.e., our *debits*) had fallen *in a much lower proportion*.

CREDITS.—Our *visible credits*, that is our exports of goods, had fallen because of the operation of several factors: (1) Other countries were able to produce just as well as we could some of the goods previously supplied by us. (2) Our prices for certain goods were much too high because of the *rigidity of our costs*, i.e., manufacturing costs in this country (especially wages) had kept up, though similar costs in other countries had dropped considerably. (3) When we returned to the gold standard in 1925 we placed a higher gold value on the pound sterling than was justified by its value in terms of goods, so that people who wanted our goods had to pay about 10 % more for them in their own currencies than they had previously done. On the other hand, a number of foreign countries, and especially France, had stabilised at rates which *undervalued* their currencies, and so were able to undersell us in foreign markets.

Likewise, our *invisible credits*, such as our income from shipping services, banking services, and overseas investments, fell off considerably as a result of the collapse in world trade, the default of overseas debtors and the fall in dividends of foreign companies in which we had sunk our capital.

DEBITS.—Our *debits* are chiefly imports. Although these decreased (mainly because of the great collapse in world prices), the fall was relatively much less than the fall in our exports because: (1) Foreign countries dumped goods at cut prices in our free trade markets. (2) The overvaluation of the pound (see (3) above) conferred a benefit on the foreign exporter because it gave him a relative advantage over our own producers. (3) The fall in prices in this country involved a redistribution of income on a grand scale: people with fixed money incomes and sections of the wage-earning class benefited most, and, in spending the extra money, they stimulated imports of certain raw materials and of consumption goods, especially of food.

THE CHANGE IN OUR LOANING POSITION.—The difficulties of our trading position were accompanied by even more serious defects in our loaning position, due mainly to three factors: (a) the disappearance of the balance on our international account; (b) the increase in our short-term borrowings; and (c) our continuance of long-term lending in spite of the decline in our favourable balance of payments.

The increase in our short-term borrowings arose largely from the fact that, during the post-war period of inflation, foreign bankers (especially in France, where, before 1928, the trend of monetary policy was uncertain) who were anxious to place their funds in a stable currency transferred much of those funds to England. For the same reason, several gold exchange countries left their gold standard reserves in this country. And, on several occasions when we had to face heavy withdrawals of gold, funds were attracted to London by the usual method of raising interest rates.

As a result, London probably held before the 1931 crisis short-period deposits totalling at least £300 millions, all in the nature of temporary loans immediately withdrawable, and, as such, a source of extreme danger. This was particularly so because, when the foreign balances were transferred to London, we did not—indeed, we could not—take any large proportion of them in the form of gold. What happened was that the purchases of sterling so depressed the values of foreign currencies that we were encouraged to spend on goods and to invest in foreign countries, at long term, money which was repayable at short notice. For during this period the flotation of foreign loans on the London Market continued as in pre-war days, and we continued our business of international deposit banking without increasing our international cash reserve proportionately to our deposit liabilities. Thus, we violated the fundamental banking principle that assets held against deposits must be kept as liquid as possible. In brief, we accumulated a vast amount of short-term indebtedness which, if lack of confidence led to a “run”, we could not meet, because our assets were tied up in long-term foreign loans.

From time to time, therefore, the Bank of England had to cope with large-scale movements of funds which were due, not to any actual disequilibrium in our balance of indebtedness, but to disturbed conditions in *other* countries, and which normal methods, such as Bank rate changes, could not adequately counteract. On a number of occasions these movements took the form of heavy transfers of gold from London, and necessitated vigorous action on the part of the Bank of England to prevent undue disturbance to internal monetary conditions.

Gold Withdrawals from London.—One of the earlier occasions on which this country was involved in difficulties as a result of her position as a custodian of the world's monetary deposits was during the Wall Street “boom” of 1928–29. During that period, intense speculative activity in New York led to the offering of extravagant rates of interest (on occasion as high as 20 %) for call-money in that

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centre, and naturally led to heavy transfers of funds to New York, particularly from London. For the greater part of 1928 and 1929 gold was being steadily shipped from London to New York, and, though Bank rate was raised to as high a figure as $6\frac{1}{2}\%$, it was only the collapse of the boom in the States that saved the situation.

Even before the American withdrawals had ceased, a keen demand sprang up from France; and from the autumn of 1929 and throughout 1930 the weekly supplies of South African gold on the London Bullion Market were taken almost as a matter of course for transfer to Paris and there were almost daily withdrawals from the Bank of England for the same purpose. These withdrawals were not, at the outset, due to any particular lack of confidence in sterling, but were a natural consequence of the "flight from the franc" of a few years before. Funds that were then withdrawn from France under conditions of panic naturally tended to flow back to France as confidence was restored; but the action of France in taking much of her trading surplus in the form of gold, and in withdrawing, *via* London, funds that she had invested in New York, added to the delicacy of our position.

By 1931, London's position had become so weakened that it only required a sudden demand on her resources to place her in a position of considerable danger. This demand now came from the Continent, where unsettled conditions induced bankers to make every effort to strengthen their positions by withdrawing their liquid funds from other countries, and, in particular, from London.

The German Crisis.—The troubles on the Continent centred in Germany, which, owing to difficulty in meeting her reparation payments, experienced one crisis after another. Much of the trouble arose because she had borrowed abroad—mainly at short term—*more than sufficient* to meet these payments, and had applied the surplus to increase her imports. The payments due to other nations as interest on this money borrowed at high rates accentuated Germany's financial difficulties, and she was able to square her international account only by continually increasing her borrowings.

The fall in world prices had caused Germany's reparation payments to become an ever-increasing burden. She found it more and more difficult to find markets for her exports (*which alone could provide her with the surplus out of which to meet her foreign debts*), and her difficulties in this connection were increased by the mounting tariff barriers of other countries. Finally, when the Stock Exchange slump in the United States caused that country to stop her foreign lending (which

had until then enabled Germany to keep her head above water), it became evident, early in 1931, that Germany would not be able to pay the sums due from her. By June, 1931, the position had become extremely grave.

A series of bank disasters, including that of the Credit Anstalt in Austria, had severely shaken public confidence in Continental centres; the gold reserve of the Reichsbank had been depleted; and the German Government was faced with the unpleasant alternatives of finding itself without sufficient cash to enable it to meet its monthly payments for salaries, etc., or else of embarking on the stormy seas of inflation.

Collapse seemed imminent when President Hoover, on behalf of the United States, intervened with a dramatic offer to postpone, for a period of one year, all payments due in respect of reparations and war debts. This proposal for a moratorium was enthusiastically received in creditor as well as in debtor countries, and a marked revival of confidence took place. To tide over the period pending the adoption of the scheme, the Bank of England, in conjunction with the Bank for International Settlements and other central banks, arranged for a short-term credit of £20,000,000 to be granted to the Reichsbank. Unfortunately, however, France was so politically prejudiced as to refuse to accept the scheme in its simple form. Fatal delays occurred and early in July it became apparent that not even the Hoover Plan would prevent a severe banking crisis in Germany.

Gold and capital left Germany in large quantities throughout the early days of July, and there were prolonged negotiations for the raising of an international loan to assist her. Again, the intransigent attitude of France delayed a settlement, in spite of the fact that an atmosphere of panic was rapidly developing.

On 13th July, crisis supervened, and the Darmstädter und National Bank (a German bank which was comparable with one of our "Big Five") closed its doors, with liabilities amounting to some 1,500 million Reichsmarks. Other German banks were subjected to a run and were compelled to limit withdrawals to from 5 % to 20 % of deposits. The Berlin Bourse was closed by Government orders, and subsequently all banks and savings banks were closed for some days.

At the SEVEN-POWER CONFERENCE held in London to cope with the position it was agreed that: (1) the £20,000,000 credit to the Reichsbank should be renewed for a further three months; (2) concerted measures should be taken by financial institutions to maintain credits; (3) the Bank for International Settlements should be invited to set up a Committee to inquire into Germany's immediate further credit needs

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and to study the possibility of converting a portion of her short-term credits into long-term credits.

The situation in Germany led to the locking up of balances held in that country on foreign account; and subsequent difficulties in obtaining exchange prevented the repatriation of these "frozen" balances. An early agreement was reached, however, by which bankers holding balances in Germany temporarily postponed demands for their repayment; and at the Berlin Conference held in January, 1932, a *Standstill Agreement* was reached by which a moratorium was granted until February, 1933. This agreement was subsequently renewed.

Meanwhile, European foreign exchange and money markets had been thoroughly disorganised. On 13th July the Reichsmark quotation in London at one time rose to 31, and, though it subsequently recovered, the collapse could not fail to affect us. It was known that London had lent Germany about £70 millions in the form of acceptances and short deposits, and it was feared that difficulties would be experienced in obtaining payment. Hence a feeling of uncertainty spread abroad; quotations for sterling in other centres, notably New York and Paris, were depressed and there were heavy withdrawals of funds from this country. In the fortnight ending 30th July, the Bank of England lost over £30,000,000 of gold, mainly to France, and this despite the fact that Bank rate had been raised first to $3\frac{1}{2}\%$ and then to $4\frac{1}{2}\%$ (30th July).

The Crisis Spreads to Britain.—At home, too, there were factors helping to undermine confidence and thus increase the drain of gold. First of these was the appearance of the Report of the Committee on Finance and Industry (the *Macmillan Report*) in July, 1931, which exposed to the world certain weaknesses in our banking and financial system.

It now became clear that unless foreign credits could be secured and confidence restored our gold reserves would be seriously depleted. In an attempt to withstand the stupendous strain, the Bank of England obtained credits in France and in the United States for £50 millions, whilst it was empowered by the Treasury under the provisions of the Currency and Bank Notes Act of 1928 to increase its fiduciary issue by £15 millions.

For the moment these steps stemmed the tide, but further trouble was brewing at home. On 31st July the Report of the Committee on National Expenditure (the *May Report*) was published, and, unhappily, it served to confirm the suspicions that our national finances were in

a bad way and that we were living much beyond our means. It showed that, largely as a result of the huge loans made by the Treasury to the Unemployment Insurance Fund, we had not been balancing our Budget for years, and that, with the prospect of a Budget deficit of £120,000,000 for 1931-32, we were heading for serious financial disorder.

This Report was widely circulated abroad, and foreign confidence in sterling was badly shaken. It became obvious that we should have great difficulty in balancing our international account and in keeping to the gold standard. Foreigners who had money in London thought that they had better get it away while they could, and gold exchange standard countries, especially, hastened to transfer any gold exchange reserves held in sterling into more stable currencies.

By this time our prestige overseas was seriously undermined. It had fallen so low that we could not have raised any further credits abroad. The value of sterling was tottering and there was every indication of a "flight" from the pound. Confidence was partially restored on the formation of the *National Government* pledged to stringent domestic economy, but, in the third week of September, difficulties abroad and nervousness on the part of foreign holders of sterling caused the London Money Market to be inundated with selling orders. In four days £43 millions were expended out of the Treasury's credit of £80 millions in an attempt to support the sterling exchange. Heavy gold shipments were made to Holland, and the withdrawals of foreign liquid balances reached the stupendous total of £200,000,000, while the Bank's gold reserve was reduced to £130,000,000.

It was made plain to our Government that further credits would not be granted by Paris or New York, and it was obviously undesirable that the Bank of England's Reserve should be allowed to fall any lower. Consequently, the Government had no option but to agree to the Bank's request to be allowed to refuse to sell gold.

BRITAIN'S SUSPENSION OF THE GOLD STANDARD, SEPTEMBER, 1931.

On 21st September, 1931, the *Gold Standard (Amendment) Act*, 1931, was rushed through Parliament. This Act suspended Section 1 (2) of the 1925 Act which compelled the Bank to give gold in exchange for its notes. It also authorised the Treasury to make such Orders in relation to the exchanges as they should consider expedient to meet any difficulties arising in connection with the suspension of the gold

standard. A Treasury Minute issued the next day prohibited purchases of foreign exchange by British nationals except in respect of (a) *bona fide* trade transactions; (b) travelling expenses or other personal requirements; and (c) commitments entered into before 21st September, 1931.

The passing of this Act was accompanied by a rise in Bank rate from $4\frac{1}{2}\%$ to 6% , and, as a precautionary measure, the Government requested the Stock Exchange not to open for business for two days. At the same time, an embargo was imposed upon the flotation of new issues on the Stock Exchange, and, when the Exchange re-opened, restrictions were introduced to curb speculation.

Effects of the Suspension of the Gold Standard.—Our suspension of the gold standard made very little change in our *internal* currency position. The suspension involved no change in the conditions of issue of our currency; gold still controls the amount of currency, subject to the elasticity clause in the Act of 1928, and the reduction in the external value of the pound has not greatly affected the prices we have to pay for goods and services as between ourselves.

Externally, the effects of the suspension were advantageous to Britain. It was obvious that the value of sterling would be adjusted at least to the point where the prices of our goods in terms of gold currencies fell to a level which reflected the world price level. Actually, however, the fall in the external value of sterling was greater than this, and the exchanges gradually settled down at a point which represented a depreciation of about 30% in terms of the leading gold currencies. This heavy depreciation was immediately traceable to current conditions of demand and supply. As our balance of indebtedness was heavily unfavourable, sterling was "on offer" and its value fell. But part, at least, of the heavy selling of sterling must be attributed to the actions of speculators, who, foreseeing a heavy inflation of sterling ahead, proceeded to *sell* sterling short. As a result, the value of sterling fell even further than was warranted by the fact that it had previously been over-valued. We were able to undercut competing nations on foreign markets, and there was every encouragement for foreigners to buy from us, and every incentive for us to increase our exports.

The lowering of the external value of our money also meant that gold standard countries which had lent us money *repayable in sterling*, or which had money on deposit in London, or which held British securities, suffered from a depreciation in the value of their claims, since sterling had become less valuable in terms of their currencies.

Withdrawals of funds from this country were, therefore, at once automatically discouraged (whether by foreigners or by our own people), whilst there was every encouragement for British investors to repatriate funds which they had invested in countries whose currencies were now much appreciated in terms of sterling. Hence, the suspension of the gold standard and the reduction in the external value of sterling while internal prices remained steady, coupled with the economy measures of the Government and the introduction of tariffs, gave a fillip to our export industries and tended to curtail our imports, whilst at the same time the improvement in our budgetary position and the general strengthening of our finances encouraged foreign investment in this country and discouraged the outflow of funds for investment overseas. In brief, the effect was to improve our international balance of payments.

The weak point in our position was the possibility and probability of other countries following us off the gold standard, as was, in fact, done almost immediately by Norway, Denmark and Sweden. Had they not done so, their large export trade to Britain would have been seriously threatened because their goods would have cost us more and we might have been forced to buy less from them.

Other countries with which we have an important trade connection also followed us off gold, and in other countries where the gold standard still remained nominally operative, exchange dealings were subjected to such restrictions that it became difficult for us to carry on trade at all. The bounty given to our export trades by the depreciation of sterling was consequently of limited effect; and, even in those markets where we have been able to quote more competitive rates, conditions have been so stagnant that buyers have scarcely been forthcoming at all.

Ensuring Exchange Stability.—It will be clear from what has been stated in earlier pages that the divorce of sterling from gold was bound to result in marked fluctuations in the foreign exchanges unless steps were taken to control the position. Naturally, the sterling exchanges were, at first, subject to violent and frequent movements, but after a few months, when the fear of inflation had passed and the speculative selling had ceased, a measure of stability was reached, and the Bank of England set about the task of pegging the exchanges in order to protect traders from the evils of fluctuations.

Clearly, the task was by no means an easy one; whereas at first the Bank's energies had to be directed towards supporting sterling, before many months had passed foreign funds began to return to London

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in such quantity that the Bank had to reverse its procedure and *prevent sterling from appreciating too rapidly*.

The appreciation of sterling and the flow of funds to London had at least one good effect in enabling the Bank to pay off at maturity the credits granted during the crisis by France and the United States. But strong measures were needed to prevent too rapid a rise, and in the Finance Act of 1932 provision was made for the setting up of an *Exchange Equalisation Account*, whose funds could be used (by the Treasury and the Bank of England in co-operation) to control the foreign exchanges.

The Exchange Equalisation Account.—The fund was formed partly by the transfer of the balance of about £25 millions still outstanding on the Dollar Exchange Fund (which had been established in 1915 to support the dollar-sterling exchange, and had been used subsequently by the Treasury in connection with our war debt payments to the United States), but, in addition, the Treasury was authorised to borrow (e.g., by the issue of Treasury Bills) up to a total of £150 millions.

The *primary* purpose of the Exchange Equalisation Account is to furnish a fund which the Bank of England can use (either by building up reserves of gold and foreign currencies or otherwise) to prevent the temporary inflow into the London Market of foreign balances from causing too great an *appreciation* in the exchange value of sterling, and also to prevent the sudden withdrawal of those funds from causing a serious drain upon our resources and a heavy *depreciation* of sterling in terms of other currencies. In addition, the Fund has been used to indemnify the Bank of England for the losses sustained in repaying the foreign credits raised in France and the United States during the 1931 crisis; to adjust the differences (either profits or losses) which accrue as a result of the purchase or sale of gold by the Bank of England at a price differing from the Mint Price (at the time of writing the market price of gold is in the region of 138s. per fine ounce, i.e., about 60 *per cent.* above Mint Price); and to adjust differences arising from the appreciation or depreciation of foreign currencies held by the Bank of England in connection with its operations in controlling the exchanges.

In May, 1933, the limit on the borrowing powers of the Treasury in respect of the Account was raised from £150 to £350 millions, making total resources of £375 millions. Experience had shown that, during a period of heavy buying pressure on sterling, the resources originally provided were hardly adequate.

THE OPERATION OF THE ACCOUNT.—The actual manner in which the Exchange Equalisation Account is operated is a matter of conjecture, since no official light has been shed on the subject, but it would appear that the initial funds were provided in July, 1932, when the Bank of England transferred to the Account some £32 millions of foreign exchange in return for Treasury bills. Since then the Account has been in operation continuously, but the Government and the Bank of England take every precaution to keep the transactions secret, in order that speculators may not take advantage of knowledge of the Government's intentions and so defeat the purpose of the Fund.

It is clear, of course, that when sterling shows a tendency to rise unduly the Treasury buys foreign exchange, i.e., sells sterling, whilst if sterling tends to depreciate unduly some of the exchange held on the Account is sold, i.e., sterling is bought. If the latter tendency were particularly strong and the whole of the exchange held on the Account were exhausted, the Treasury, if it wished to keep the sterling exchange rates stable, would be forced to buy gold from the Bank of England and ship it abroad, in order to replenish the resources on the Account: these resources would then be available to support sterling. But it is probable that in such circumstances the Treasury would allow the sterling exchange to fall, rather than deplete our gold holdings.

On the other hand, if sterling showed such a strong tendency to appreciate that the Treasury had to use the whole of the sterling resources of the Account to buy up foreign exchange, it would still be possible to continue operations, for the sterling resources could be replenished by using some of the exchange held on the Account to buy gold abroad, ship it to London, and sell it to the Bank of England.

Although the Exchange Equalisation Account was instituted to enable the Treasury and the Bank to cope with extraordinary conditions of a temporary nature, there seems to be no reason why it should not remain a permanent feature of our financial machinery. Even if the gold standard is fully restored, the central bank in this country, as in other countries, will have to be in a position to exercise a much wider degree of control than was the case in pre-war days, for Bank rate policy and open market policy are powerless to cope with the large capital movements which are now made possible by the world's highly organised exchange markets. But, however extensive the powers granted to the respective central banks, it would seem that, to obtain really effective control, there must be a much higher degree of international co-operation than has hitherto been achieved: action

by the Bank of England and the Treasury will be largely ineffective if the central banks of other nations are operating in a contrary direction. Economic nationalism smashed the gold standard in 1931, and, if it continues, no exchange fund is likely to be a permanent defence against currency instability.)

Sterling Returns to Favour.—Before the payment of the December, 1932, instalment of our war debt to the United States, the sterling exchanges had weakened considerably, to such an extent, in fact, that the Treasury had been obliged to remove the “peg”. The weakness was due to several causes:—

(1) The seasonal pressure on sterling; (2) the continued fall in prices abroad, unaccompanied by a further fall in sterling prices; (3) the impending payment of the war debt instalment, giving rise to speculative selling of sterling; and (4) the fear that, following the conversion of the 5 % War Loan, a fairly considerable amount of stock might have to be repaid to foreign holders.

Actually, the payment of the war debt instalment had the effect of restoring confidence in sterling, and the fact that it was paid in gold avoided the necessity for purchasing dollars in the Market. Moreover, only a small proportion of War Loan stock had to be repaid abroad. As a result, the early days of 1933 saw a considerable strengthening of the sterling exchanges, while our financial position had become extraordinarily liquid as compared with that existing during the crisis of 1931.

From the trough of the depression in the summer months of 1932, our domestic trade and industry had shown a vigorous recovery, which was more marked than was the case in most other countries. Government finance had been put on a sound basis by the balancing of the Budget, whilst the banking position had been markedly strengthened by an influx of gold which had made it possible to reduce the fiduciary issue to the old figure of £260 millions.

A reduction of Bank rate to 2 per cent. had made possible the most stupendous conversion scheme ever undertaken by a Government, namely the conversion of the £2,000 millions of 5 % War Loan to a $3\frac{1}{2}$ % basis. Further, the Board of Trade estimates showed that, in both 1932 and 1933, there was a definite improvement in our international trading position, the estimated deficit on our international balance of payments for 1933 being only £4,000,000 (see *ante*, page 285).

Reparations and War Debts.—The strenuous efforts of Britain and other leading nations to restore some measure of prosperity have been severely handicapped by the existence of the vast amount of

unproductive international debts, chiefly reparations and war debts, which during recent years have crippled the world's trade and disorganised the exchanges. The problem of the payment of such debts is two-fold: there is the difficulty of *raising the money* to pay reparations or to meet the service of the debts, which is largely a problem of the taxable capacity of the debtors; and, secondly, there are the difficulties involved by the strain imposed by such abnormal payments upon the exchanges, i.e., the *transfer problem*.

By virtue of various funding arrangements the inter-Allied war debts were considerably scaled down during the years 1925-27, whilst the reparation payments, too, were drastically reduced by the Dawes Plan, and later by the Young Plan. At the time of the 1931 crisis, Great Britain was on balance a creditor for but a small amount, as she had agreed to pay the United States the whole amount of over £32 millions per annum received by her as reparations from the ex-enemy countries, and as part-payment of war debts from the Allies. France had annually to pay some £40 millions, against receipts of about £24 millions, whilst Germany had to pay over £80 millions each year.

Germany has, of course, been the worst sufferer from inter-governmental debts, for the amounts of the annuities to be paid by her were fixed at such a ridiculously high figure as to constitute an intolerable burden. To raise the money she had to impose ruinous taxation, and after a time she was quite unable to meet the payments.

Even more difficult than the problem of *collecting* these payments was the problem of *transferring* them to creditor countries. The money had to be paid by Germany in terms of pounds, dollars and francs, and this meant that, as she had no surplus reserves of gold which she could use for the purpose, she had either to build up a sufficiently favourable balance of trade out of which to provide the surplus or borrow money abroad in order to meet her debts. Unfortunately, the tariff barriers maintained by the creditor countries prevented Germany from settling the debts by the export of goods, so she was forced to raise loans abroad (largely in New York) in order to meet some of her liabilities. Obviously, this procedure could not go on for ever; after 1930, Germany's balance of trade steadily became more adverse, while lenders became gradually unwilling to make any further loans. By 1931 it was clear that Germany would not be able to make any payments at all.

The problem of transfer was not felt by Germany alone. Each of the countries concerned found that the maintenance of stable exchanges

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was difficult in the face of the enormous transfers of foreign currency on account of inter-governmental debts. These transfers of funds, which had no connection with genuine trade transactions, threw a strain on the exchange mechanism which it was entirely unsuited to bear, and also helped to bring about price disparities in the various countries.

As far as possible, the debtor Governments accumulated funds in readiness to make payments at times when the exchange rates were favourable, and supplies of the creditor country's currency plentiful; but if conditions were not sufficiently favourable to enable them to do this, some other course had to be followed. Sometimes it was possible for the central bank concerned, by altering its discount rate, to attract supplies of foreign exchange to its Exchange Market, or, in other words, to stimulate the investment demand for its own currency. Frequently, however, it was not found possible to attract sufficient foreign currency to cover the necessary payments. The debtor country was then left with only two alternatives: it could either ship gold to the creditor country, or adopt the more usual course of raising a foreign loan to enable it to meet its payments. Even these, however, are only temporary expedients. Gold shipments are possible only to a limited extent, while the raising of foreign loans is an expensive method, and one that can be pursued only so long as the borrowing country's credit holds good. Ultimately, a debtor country can meet its adverse balance only by increasing its exports of goods.

The Lausanne Conference, 1932.—The establishment of the Bank for International Settlements eased the situation to some extent, for, besides fulfilling its main function of arranging for the transfer of German reparations, the Bank also lent its assistance to the central banks of other countries to facilitate their transfer operations. But this could only be a temporary palliative. It was obvious that ultimately the whole question of war debts and reparations would have to be revised, and for this purpose the Lausanne Conference was convened in 1932.

At this Conference calmer counsels prevailed, and the European nations reached an agreement providing for the virtual cancellation of all reparations. Unfortunately, ratification of this agreement was made conditional upon a satisfactory settlement being reached with the United States on the question of war debts. But the latter country, at the expiration of the year's moratorium granted in 1931, showed no willingness to postpone the payments due in December, 1932. Great Britain was compelled to remit over £19 millions of gold in settlement

of this payment, while default was made by France and Belgium, among others.

The World Economic Conference, 1933.—At Lausanne it was concluded that, even if the vexed question of reparations and war debts were arranged satisfactorily, the world would still have to face the task of rehabilitation and recovery of industrial and trade conditions. Accordingly the League of Nations was invited to convoke a World Conference "to decide upon the measures to solve the other economic and financial difficulties which are responsible for, and may prolong, the present world crisis".

The Conference met in London in June, 1933, with a very extensive agenda, ranging through six divisions: (1) Monetary and Credit Policy; (2) Prices; (3) Resumption of the Movement of Capital; (4) Restrictions on International Trade; (5) Tariff and Treaty Policy; and (6) Organisation of Production and Trade.

It was recognised that while the discussions on "economic disarmament" were proceeding there ought to be a "truce" to further economic warfare. A moderately satisfactory tariff truce was therefore concluded before the Conference met, and, immediately after its assembly, efforts were made to reach a similar "exchange depreciation" truce, without which any agreements not to raise tariffs were clearly of no more than theoretical value.

The Government representatives of the major Powers succeeded in reaching an agreement for temporary exchange stabilisation; but, as the United States early in 1933 had abandoned the gold standard in an attempt to revive her depressed industries (see below), the mere hint of dollar stabilisation brought a sharp reaction in Wall Street and in dollar commodity prices, so President Roosevelt promptly repudiated the agreement. He later refused point-blank even to discuss stabilisation or "long-range" monetary policy.

Without currency stabilisation, any agreements which might have been reached on tariffs would have been valueless, for the effects of protection can be obtained by currency depreciation without any raising of fiscal barriers; similarly, discussions for the removal of exchange and other restrictions would have been impracticable.

Thus the Conference dragged on for six weeks before it adjourned for an indefinite "recess", and virtually nothing was done in the form of tangible agreements (save the Silver Agreement, referred to on page 402), largely owing to the uncompromising attitude of the United States, whose domestic situation tied the hands of her representatives in any attempt at co-operation in the matter of financial policy.

THE AMERICAN CRISIS.

When the great financial boom in the United States collapsed in the autumn of 1929, conditions in that country were left in a particularly sensitive state. Thousands of people had been ruined by the heavy slump in security values, whilst many others were hard hit because the loss of confidence which followed the crash caused a serious fall in commodity prices. Agriculturists, especially, suffered because the prices of their products had fallen even more than the prices of manufactured goods, while the banking system, already notoriously inferior to that of other leading countries, could not fail to be affected by the adverse general conditions.

The unfortunate domestic situation naturally made the United States particularly sensitive to the European disturbances which characterised the years 1929 to 1931, and the position was not improved when, following Great Britain's suspension of the gold standard in September, 1931, the alarm among short-term lenders in all countries led to a heavy withdrawal of funds from New York and to a vast export of gold from that centre. Actually, the gold reserves of the United States were so vast that she could well have withstood a far greater drain than any to which she was subjected during these critical years, and the causes of the revolutionary "experiments" which in 1933-34 startled the world were to be found mainly in the nation's unsatisfactory banking structure.

The Banking Crisis, 1933.—The history of banking in the United States has been punctuated by a series of disasters which find no parallel in the history of any other country. Towards the end of 1931 it became apparent that the American banking system was heading for another such crash. Following the Wall Street collapse, many banks had been badly hit by the depreciation of securities in which they had invested, while their difficulties were markedly increased by the depression in the agricultural industry, in which the banks of the Middle West and West were heavily committed. Actually, a large part of America's economic system had fallen heavily into debt during the preceding period of prosperity, and as prices (especially agricultural prices) fell and the purchasing power of money correspondingly rose, the burden of debt became increasingly crushing. Debtors had no hope of paying their creditors in a currency which had risen so much in value. Agriculture and industry were to a large extent insolvent, and the banking system was necessarily imperilled.

During 1931 there had been runs on some of the banks, and these

banks were unable to obtain adequate funds because their securities were difficult, if not impossible, to realise. In October, 1931, President Hoover induced the banks to set up the *National Credit Corporation* for their mutual protection, but this proved incapable of dealing with the situation, and, in January, 1932, it was replaced by the *Reconstruction Finance Corporation*, a Government institution with vast resources at its disposal, charged to grant advances to banks and financial institutions which were in need of liquid funds but which were otherwise sound. Despite these efforts, the banking troubles continued.

In February, 1933, a run developed on the Michigan banks and soon spread to other States. Many important banks and hundreds of smaller local banks were compelled to stop payment and, as a result, the public all over the country drew out their deposits and hoarded notes and gold in enormous quantities. Even the strongest banks were unable to withstand the pressure, and, to save the situation, President Roosevelt declared a banking moratorium and forbade the export of gold. So successful was this action that after a few days the banks were able to re-open, and, though the dollar had depreciated during the interval (owing chiefly to a flight of funds to London and other European centres), it soon recovered the lost ground.

Nevertheless, the financial position of the country had reached such a pass that drastic measures were called for. In some way the unfortunate past had to be liquidated. Either half the debtors and productive undertakings in the country were to be allowed to go bankrupt, and swell by further millions the existing millions of unemployed, or the nation as a whole had to acknowledge its failure by devaluing its currency in order to raise prices and lessen the burden of debt. For obvious reasons the first alternative was out of the question.

Roosevelt's Prosperity Programme.—After the crisis, President Roosevelt launched his "prosperity programme", and, as a preliminary to his reconstruction schemes, he decided to free the dollar from external influences and to subject it to Government control. To this end the dollar was divorced from gold by a Proclamation of 6th March, 1933, confirmed by an Order of 20th April, 1933, and its exchange value began at once to depreciate.

The President was definitely committed to a policy of currency inflation with the object of raising prices to their 1926 level. To this end the Agricultural Adjustment Act of 12th May, 1933, gave him wide powers with regard to finance and industry. He was authorised

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to reduce the gold content of the dollar by 50 %, to issue \$3,000 millions of paper currency, and to legalise the use of silver as money at a fixed ratio to gold.

In addition, plans were made for restricting agricultural production and in other ways raising agricultural prices, and for the absorption of the unemployed on enormous schemes of public works, to be financed by the issue of Government bonds. Large sums were allocated to the direct relief of the unemployed, and other measures were taken under the comprehensive National Industrial Recovery Act (N.R.A.), passed on 18th June, 1933.

As all debts in the United States were payable in terms of gold dollars, it was necessary, in order that debtors might obtain the full benefit of currency depreciation, to supplement these inflationary measures by depriving creditors of their right to demand payment in gold and by compelling them to accept payment in the depreciated legal tender currency. Accordingly, the Gold Clause Abolition Act, passed on 6th June, 1933, rendered inoperative any clause in dollar bonds whereby the debtor was bound to pay in *gold* dollars. As a result, all dollar bonds and all debts expressed to be payable in dollars are now payable in paper dollars. The effects are to lighten the burden of American debtors (as the dollar becomes less valuable in terms of goods) and to deprive creditors in gold standard countries of part of the money due to them.

The whole programme depended for its success upon an expansion of purchasing power and the raising of prices. This being the case, the abandonment of gold was an essential preliminary. If the dollar had remained linked to gold, any rise in dollar prices would have handicapped American exporters and would have produced an influx of goods from abroad. At the same time, the value of the dollar on the Exchange Market would have been forced down, gold would have flowed outwards, and the basis of credit would have contracted, so defeating the whole object of the scheme.

It was because of these plans that Roosevelt was unable, through his representatives at the World Economic Conference, to agree to take steps to promote a co-operative financial policy: to have done so would have meant abandoning the whole programme of reflation.

Increasing Purchasing Power.—For a few months Roosevelt's plans seemed likely to have the desired effect: there was a considerable rise in the United States price level and a marked fall in the exchange value of the dollar. Towards the end of July, however, the rise in

prices stopped and there was even a reaction which threatened the success of the Recovery Programme. There was much unrest among the masses because wages had remained practically stationary and unemployment had been scarcely affected, so that the purchasing power of the people had not increased in proportion to the rise in prices which had taken place. Moreover, that rise had by no means satisfied the farming and cotton-growing classes, whose clamour for more drastic inflationary measures the President could not afford to ignore. Hence, further plans were implemented to bring about the required acceleration in the processes of production and distribution.

Steps had to be taken to augment the purchasing power of the community so that it could keep pace with, and even exceed, the rise in commodity prices. The burden of unemployment, too, had to be relieved in some way. Accordingly, Roosevelt determined upon certain additional measures involving the extension of public spending by speeding up his public-works schemes, whereby he hoped to create a demand for capital goods; more stringent control of wages and hours of work in order to reduce unemployment and extend the demand for consumers' goods; the control of crops, of speculation and of other factors so that the prices of agricultural products should rise more rapidly than the prices of industrial products and so benefit the politically important farming community; and, more important still, definite steps were taken to introduce the long-expected out-and-out inflation policy for the implementation of which the President was being pressed on all sides.

In September, the Treasury was empowered to buy gold freely at prices above the existing legal price of \$20·67183 per fine ounce, and in October this power was transferred to the Reconstruction Finance Corporation. This new policy was based on the admission that the existing mint price for the metal did not offer a sufficient inducement to American gold producers.

It was hoped that by raising the price of gold in terms of dollars it would be possible to cause a further depreciation of the dollar, and a further rise in dollar prices. At first only domestically mined gold was bought, but, as these supplies were small, the purchases had little effect, and the programme was extended to include official gold purchases in the world markets at gradually increasing prices. In the result, large quantities of gold were bought, and the dollar depreciated still further, but internal prices did not follow at all readily. The fact was that, though the President had succeeded in considerably expanding the *basis of credit* in the United States, he had not succeeded

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in creating a *demand* for new credit: reflation cannot be successful unless there are both ample supplies of credit *and* a ready outlet for them.

The plans of the President and his Brain Trust could not compel producers to work at a loss; they could not force consumers to buy goods at higher prices or to buy more goods than they required. In brief, Roosevelt's supermen found that their policy of taking control of such vast economic factors as existed in the United States involved difficulties with which even they were incapable of dealing at all adequately.

Moreover, the continual juggling with the currency was now disturbing confidence, and there were unmistakable signs (notably a fall in the price of public stocks) of a flight from the dollar. The gold-buying plans of the Reconstruction Finance Corporation had proved a complete failure, and the time had come when the dollar had to be again solidly established on a gold basis.

Roosevelt Devalues the Dollar.—On 31st January, 1934, President Roosevelt issued his momentous proclamation providing for the revaluation of the dollar by a reduction of its nominal gold content to $15\frac{5}{21}$ grains (900 fine), as compared with its normal content of 25·8 grains. It was also announced that the Treasury would buy *all* gold offered to it at \$35 per ounce, and would sell gold if the dollar touched gold export point. These provisions brought the United States back to the gold standard with a gold value for her currency equal to 59·06 % of its former gold value.

The gold value of the dollar was thus reduced to nearly one-half of its old value, and, as the external value was bound to come into line with the gold value, it was hoped by those responsible for this plan that the internal value would soon follow suit, i.e., that internal prices would soon rise.

The President's Proclamation was followed by the Gold Reserve Act, 1934, which empowered the Treasury to appropriate the whole of the gold stocks of the Federal Reserve banks, to withdraw all gold from circulation, and to redeem the legal tender paper currency only to the extent necessary to maintain the purchasing power of the currency.

With the object of providing the United States Treasury with funds which it could use to maintain the external value of the dollar, a *Dollar Stabilisation Fund* was established to perform duties similar to those of our own Exchange Equalisation Account, with resources amounting to \$2,000,000,000, the proceeds of the profit resulting from

the revaluation of the U.S. gold reserves, following the devaluation of the currency.

It is highly important to observe that by this action the United States did not stabilise in the legal sense, as there is no *Act* embodying the new gold content of the dollar; it was fixed merely by presidential proclamation. Further, the gold content is not *permanently* fixed, for the President has for two years power to vary the content at will within the range of 50 % and 60 % of the dollar's former gold content. Nevertheless, the United States is now definitely back on gold, and the external value of the dollar in terms of other gold currencies is closely limited by its gold value. True, the gold standard set up is not the kind of gold standard that we have been used to, and it might well be described as a "flexible bullion standard", for the gold content of the dollar can be altered at the discretion of the President, and it is clearly his intention to stabilise the dollar, not in relation to the international gold standard, but in relation to American internal prices.

Following the devaluation of the dollar, there was an enormous flow of gold from Europe (and especially from London) to the United States, while (as a result of the undervaluation of the dollar following its rapid depreciation) American producers naturally became stronger competitors in world markets. Indeed, the latest phase in the American experiment is likely to be far-reaching in its effects on conditions in the United States and the world generally. In particular, it cannot fail to threaten the stability of the "gold bloc", comprising France, Belgium, Holland, Poland and Switzerland, who, largely as a result of Roosevelt's attitude at the World Economic Conference, informally agreed * to adhere to gold at all costs and to render one another mutual assistance. Though both the Swiss franc and Dutch guilder have been in sore straits, the "bloc" has so far been effective, but its future position will depend largely on the action taken by the United States by means of the Dollar Stabilisation Fund to stabilise the external value of the dollar.

American industries have, of course, everything to gain from the maintenance of an undervalued dollar, because that means that they can compete on favourable terms with the industries of other nations, and that the depreciated exchange affords them a degree of "protection" additional to that of their already high tariff walls. The undervaluation of the currency is an automatic check to imports and

* At a meeting held in London on 3rd July, while the World Economic Conference was in session.

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a distinct incentive to exports. It would seem that a continuance of this policy is bound to have disastrous effects on European trade with the United States, and must certainly make it impossible for the United States to obtain payment of their European debts. Moreover, the favourable trade position of the United States is bound to lead to a rise in the external value of the dollar above mint parity, *unless the Dollar Stabilisation Fund is used to check that rise*. Doubtless it is the present intention of the United States authorities to use the Stabilisation Fund for this purpose, but, in view of the insistence of the United States on a favourable balance of trade and its disinclination to lend abroad, it seems scarcely possible that even the large resources at the disposal of the authorities will enable them indefinitely to buy up such surpluses of foreign currencies as are bound to come on the Market.

The indications, therefore, are that the drain of gold from Europe to the States will persist, and, if this does happen, the "gold bloc" countries will find themselves in sore straits, and are likely, therefore, to be forced either to deflate their currencies or to suspend the gold standard. If the gold standard is abandoned by these countries, we, in turn, will suffer, as sterling will appreciate and our competitive position will be threatened. Our Exchange Equalisation Account will have to be used to counteract the rise in sterling, and a currency war between Britain and other countries will be inevitable in the absence of any agreement on monetary policy.

THE PROBLEM OF THE GOLD STANDARD.

It will be obvious that Britain cannot continue indefinitely to maintain the currency arrangements which have existed since her departure from gold in September, 1931. Under those arrangements we have a hybrid system which is neither a gold standard nor a managed system, for, although the volume of our note issue depends on our holdings of gold, our currency is not *convertible into gold*. And, as the law still requires all notes in excess of the Bank of England's fiduciary issue to be backed by gold *at the old parity*, the Bank makes a theoretical loss on any gold which it purchases and stores in its vaults, while our exchanges (though partially controlled by the Treasury through the Exchange Equalisation Account) are subject to the same fluctuations as would occur if our note issue were entirely divorced from gold.

This patched-up arrangement cannot be more than a temporary expedient. The course of world affairs may compel us to maintain

it, perhaps for some years to come, but eventually we shall have to decide whether we are going to revert to the gold standard proper, or whether we are going to strike out in some new direction. In other words, we shall, eventually, again be faced with the problem which received such prominence before we returned to gold in 1925—whether we will re-adopt the gold standard or institute a “managed” currency.

Although the earlier controversy on this matter resulted in a victory for the gold standard, there was, long before our abandonment of gold in 1931, wide support for the view that our action in returning to gold at the old parity in 1925 was ill-advised, and that we should either have returned at a lower parity (i.e., devalued) or have established our currency system upon a scientifically “managed” basis. The trend of events since the crisis of 1931 has done much to strengthen the opposition to the gold standard.

The Case for the Gold Standard.—We have, in the course of this book, referred many times to the arguments in favour of the gold standard. Briefly, the case for the gold standard rests upon the two principal propositions that it automatically compels any countries by which it is maintained to pursue a sound currency policy, and that it ensures reasonable stability of the exchange rates between those countries. Monetary history certainly lends support to these arguments, for in most cases where the gold standard has been abandoned, inflation and often disaster have resulted. Under a gold standard, the monetary authority can increase its note issue only against further supplies of gold; and, ordinarily, increased supplies of gold can be obtained only if a nation has a favourable balance of international indebtedness. Furthermore, for reasons which we have reviewed, a gold standard country *must* pursue a sound monetary policy and abstain from inflation of her currency, otherwise her exchanges will become unfavourable and her financial position is likely to be jeopardised by a drain on her gold reserves.

Both our examination of the theory of foreign exchange and our review of the recent history of world currencies will have clearly demonstrated that the gold standard, if properly operated, tends to minimise the evils of fluctuating exchanges and so to remove one of the greatest obstacles to international trade. For a long period of years before the Great War the gold standard unquestionably brought a high degree of stability to the world's trade and exchanges, and it is very difficult to convince the majority of people that such stability can be achieved by an untried system, particularly a system which

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involves a high degree of human interference and which is not directly tied to any external independent basis such as gold.

One of the strongest arguments for the gold standard is the confidence it has so widely inspired. When we are considering international money and the basis of the world's credit, the psychological and moral aspects become as vital as the purely economic considerations, and there can be no question, so far, that the majority of the people of the world not only consider the gold standard to be the best standard, but also have greater confidence in a country which is on that standard than in a country which is divorced from gold.

Finally, there is the very important argument that the position of this country as the world's banker, of London as the world's leading financial centre, and of sterling as the principal international currency, demand our adherence to the gold standard. Our vast international financial business has been built up largely because sterling and gold have been so long synonymous. Foreigners were willing to settle vast obligations in terms of sterling because they had the confidence that it represented a certain value in terms of gold, the only medium of exchange which has so far earned international acceptance. Moreover, they placed vast sums in London deposits and in British securities (and so markedly increased London's financial resources) because they had confidence that their funds could be withdrawn at any time with relatively little risk of loss.

The Disadvantages of the Gold Standard.—The great disadvantage of the gold standard is that, although it ensures *exchange* stability, it does not ensure stability of internal *prices*.

Over long periods the world value of gold in terms of commodities has fluctuated considerably. There have been periods when the supply of new gold has exceeded the demand for currency and other purposes, with the result that there has then been a long-period tendency for prices to rise. At other times the supplies of new gold have failed to meet the increased demand which has arisen from increased industrial productivity, and then there has been a long-period tendency for prices to fall.

But these general rises and falls, although distinctly noticeable over a long period, have not proceeded regularly. They have been interspersed with periods of expanded credit, high prices and trade booms, followed by reduced credit, heavy falls in prices and depressed trade—each series of boom and depression constituting the phenomenon known as the *trade cycle*, which our existing knowledge and methods,

including the gold standard, have been unable to avoid and scarcely able to mitigate.

Another disadvantage is that, as the world price level and the value of gold are interdependent, a country which adopts the gold standard and so ties the value of its currency to the value of gold, ties its own price level for good or ill to the world price level. For if its price level is higher than that of the world price level, it will lose gold which can be used more profitably elsewhere, while in the reverse circumstances it will gain gold. These movements will go on until internal prices correspond to world prices.

Every gold standard country knows that, in adopting gold as its standard, it is taking a chance that natural supplies of new gold will be adequate, excessive or inadequate for the world's needs. But recent experience has shown that those supplies, and consequently world prices and the monetary affairs of all countries, may be artificially affected by the ill-conceived monetary policies of so-called gold standard countries.

Both the United States and France, by their sterilisation of gold supplies in the years after 1925, markedly accentuated the fall in the world price level at a time when supplies of new gold might otherwise have been adequate to the world's needs.

If these countries had allowed their additional gold supplies to become the backing for increased issues of notes, the increased supplies of money would have caused their prices to rise above world prices; i.e., the value of gold in those countries would have fallen relatively to its value elsewhere. Gold, therefore, would have been withdrawn and distributed among other countries where its purchasing power was now greater. In this way, a new equilibrium would have been established between prices in these countries and world prices—probably at a slightly higher level. Actually, however, the sterilisation policies of the United States and France prevented their prices from rising and thus prevented world prices from reaching a level commensurate with the supplies of gold available; in fact, prices in those countries as well as in other gold standard countries continued to fall.

The first Interim Report of the Gold Delegation of the Financial Committee of the League of Nations, published in 1930, revealed yet another disadvantage. After exhaustive enquiries the Delegation reported that, if no new gold discoveries were made, conditions pointed to a progressive decline in gold production after a few years. Working on the assumption that there would be no important changes in the reserve requirements of central banks and that the increase in the

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demand for currency would continue at the normal rate, the Delegation concluded that the supply of new gold for monetary purposes would prove inadequate by 1934. Up to the present the anticipated shortage has been postponed because the abandonment of the gold standard by this and other countries, leading to a much higher price for gold, has made it profitable to work some of the poorer grade ores and poorer mines, and has caused a considerable increase in gold production. It seems likely, however, that in time this influence will wear off, and in the absence of new gold discoveries, the world will doubtless again be faced with declining gold supplies and, if the gold standard is generally adopted, a period of falling prices with all their attendant evils.

A Managed Gold Standard.—It has been pointed out that a strong argument in favour of the gold standard is that it provides an *automatic* regulator of the exchanges. In practice, the automatic working has been very largely modified by central bank manipulation, because it has been found that, if the standard was allowed to operate without control, it was liable to result in undue disturbance of the delicately balanced monetary mechanism. Moreover, it has only too often happened that, when the automatic adjustment began to take place and gold began to flow from one country to another, the country which was losing the gold was unable to stand the strain, and after a time was forced to suspend the standard although it was merely performing its function as an equilibrating device.

Now those who pin their faith to gold consider that the disadvantages of the gold standard are often exaggerated, and that many of these disadvantages could be removed by applying a system of management to the gold standard as it operated in pre-war days. In other words, they maintain that the world should not return to the purely automatic gold standard, but that it should generally adopt a form of managed gold standard similar to that which has in fact existed in the most progressive countries.

The Macmillan Committee of 1931 in their Majority Report recommended that the monetary system of this country should be a managed system, though (for reasons which we have already discussed) a system tied to gold. According to the Committee, the three main objectives of a sound monetary policy are: (a) the maintenance of the parity of the foreign exchanges; (b) the avoidance of the credit cycle; and (c) the maintenance of the stability of the price level. These objectives, they considered, could not be achieved by allowing the gold standard to work automatically; on the contrary, their attainment

would necessitate the constant exercise of knowledge and judgment by an institution of ripe experience, great resources and unchallengeable authority. Needless to say, they proposed that the Bank of England should be the institution chosen for this purpose.

The Committee did not confine their proposals to the management of our *domestic* currency system. They considered, too, that the *international* gold standard should be managed by co-operation between central banks, first to raise the general price level, and secondly to maintain that price level as stable as possible over long periods. In view of the Report of the Gold Delegation, referred to above, it would seem essential that the nations of the world should come to some arrangement for the international management of the gold standard if it is to work satisfactorily in the future.

A Managed Currency. The opposing school of thought favours a complete divorce from gold and the institution of an inconvertible paper currency managed in such fashion as to ensure stability of prices within the country. They argue, with some reason, that if it is possible to "manage" the gold standard so as to achieve price stability, it would be just as easy to manage an inconvertible note issue divorced from gold, and that the management would be more scientific and more effective.

In its elementary form, the managed currency theory advocates the establishment of what is known as a *tabular standard of value* or an *isometric standard*, based on a carefully compiled price index number. This would be calculated on prices ruling during a "normal" period (regarded as the basis or standard). At specified intervals the current index number would be calculated, and, if the level of prices showed a fall which it was desired to correct, the currency would be expanded, in order to bring about a rise in prices. On the other hand, if the index indicated a rise in prices, the currency would be contracted in order to bring about a fall in the price level. Thus, the intention and effect would be to stabilise prices at the level of the standard period.

Exactly how the currency should be or would be expanded or contracted is a difficult subject. No doubt the existing instruments of the Bank rate and Open Market Policy would be used, but it is equally certain that the central bank would have to adopt other and more direct methods of control, including probably some method of manipulating investment and savings.

Actually, the modern conception of currency management implies far more than the elementary principle of maintaining rigid price stability by reference to a standard index number. It means the

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control of currency and credit with the object of maintaining the most desirable relationship between retail and wholesale prices, stock exchange prices and foreign exchange rates.

The Case for a Managed Currency.—Naturally, the case for a managed currency is based very largely on the criticisms levelled against the gold standard. Of these, the most important is the criticism that the gold standard does not ensure stable *internal* prices ; that, under the gold standard, the value of our money in terms of goods is frequently changed.

It is not claimed that a managed currency would eliminate price fluctuations altogether, but that it would prevent those long downward or upward trends in the price level which seem inseparable from the gold standard, and which are so detrimental to trade. Small fluctuations about the agreed standard (or normal) level of prices *would* occur; but, if necessary, these would be corrected almost at once and so would have a negligible influence on trade.

Although a stable price level would not, of itself, eliminate the adverse effects of the trade cycle, it would do much to lessen those effects and to make trade more stable. Under a gold standard, trade fluctuations and price movements react upon one another. If trade slackens, prices fall, and the fall in prices causes further trade inactivity which, in turn, leads to a further fall in prices. According to the advocates of a managed currency, this interactionary process would be cut short. If trade slackened, prices would not be allowed to fall. As soon as the downward tendency was observed, more currency would be put into circulation, a slight upward move correcting the previous downward tendency would result, and trade activity would be fostered. The minimising of the effects of the trade cycle, and the removal of the monetary causes thereof, would, it is said, also make easier the elimination of other causes of the cycle.

Objections to a Managed Currency.—One of the most important objections to a managed currency is that, although such a currency system might minimise internal price fluctuations and so stabilise the internal value of the currency, it would not obviate fluctuations in the exchange rates, i.e., in the external value of the currency. It is contended that, as exchange fluctuations are damaging to trade—particularly to international trade—and as the economy of this country is so dependent upon international trade, the loss resulting from exchange fluctuations would outweigh the advantages derived from a stable domestic price level.

Of course, if all nations adopted a managed currency there would

be no reason why their exchanges should be subject to marked fluctuation, since the purchasing power parities between them would not vary. Although it would seem that there is little likelihood of such an achievement, the possibility must not on that account be entirely ignored. Experience since 1931 has shown the practicability of such an arrangement, for, although sterling since that date has been off gold, quite a number of countries have based their currencies on sterling because it has proved to be more stable than gold. Hence it is contended that, if sterling were made a managed currency and thus given even greater stability than it now possesses, the countries constituting the sterling bloc would follow suit, and there would be established a large area of stable prices and stable exchanges.

It will be realised that the greatest benefits of *international* currency stability could not be achieved under even a managed currency system unless there were very close co-operation between the central banks of the great nations. But this is equally true of the gold standard for experience has shown that if one or two great nations adopt an isolated policy whilst operating the gold standard, they may completely upset the working of the standard in all other countries.

Some economists oppose currency management on the ground that complete stability of internal prices is not necessarily desirable. The value of money, they say, ought to vary as the efficiency of production changes, and the maintenance of a rigid level of internal prices would merely add another element of rigidity to our already too rigid economic system.

One reply to this is that rigid stability of prices is better than the uncontrolled fluctuations which occur under a gold standard. On this point it is difficult to decide unconditionally in favour of either alternative, but rigidity would appear to carry with it such serious evils that it should at all costs be avoided. For this reason supporters of currency management are willing to concede this point and to agree that management should not aim at securing rigid stability of prices, but rather at *controlling* prices in the interests of stable trade and finance.

It might also be difficult to ensure that a managed inconvertible note issue would be free from political interference, and that the management was exercised purely in the interests of stability and not in the interests of certain sections of the community or of the political aims of the party in power. To this the advocates of a managed currency reply that no system is free from such influence. It cannot be denied, however, that the success of currency management, like

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that of any other standard, would be dependent on the adoption of a sound financial policy by the Government; and the comparative ease with which a managed currency could be manipulated to political ends is an important argument against its adoption.

Another important objection is that Britain, with her dependence on international trade, cannot divorce herself from the effects of an upward or a downward move of world prices merely by maintaining the stability of her domestic price level by the adoption of a managed currency. However well managed our currency, we should still suffer from a dislocation of world trade. As against this it is argued by the managed currency theorists that we should not suffer any worse than we should have done with a gold standard, and that we might reasonably hope to prevent the worst repercussions on our domestic conditions by maintaining price stability at home.

A further point advanced as an objection to currency management is that monetary policy is only one of many causes of the trade cycle, and that trade stability would not be achieved merely by ensuring the stability of internal prices unless the other contributory factors were subject to control.

Finally, there is the most damaging argument of all, that even though a comprehensive system of currency management may be desirable, we have not, at the present stage of economic development, sufficient knowledge of the monetary mechanism, nor sufficient data regarding current conditions, to enable any currency authority (even though it were given unlimited powers) to operate safely and successfully a currency system which depended almost entirely on human judgment. It is said that any attempt to do so would amount to little more than a blind groping in the dark. We should be sailing in uncharted seas. Who, for instance, could say to-day to what extent it is desirable that the various price levels should be raised? Should wholesale prices rise 10 %, and retail prices only 5 %? How far should stock exchange prices be raised? And should our rates of exchange be raised or forced down? These are the questions which would have to be decided by the currency authority, and it is suggested that with our present limited resources of experience and knowledge the answers would be little more than guesswork.

This argument appears to be unanswerable. The enormous divergency of opinions at the present moment as to the changes which are needed in the price structure proves how difficult would be the task, and how doubtful the success, of any attempt to regulate artificially the delicate price relationships which are so

important a factor in the maintenance of equilibrium in our economic system.

For this reason, if no other, it appears that the institution of a managed currency system might result in effects as harmful as, if not worse than, those experienced under a gold standard. And as the latter has at least the advantage that we have experience of its working and knowledge of its methods, we are forced to the conclusion that a return to gold should be the ultimate aim of monetary policy in this country.

Sterling v. Gold.—Although our abandonment of the gold standard in 1931 was a purely temporary measure, and although the official intention was again to link sterling to gold as soon as conditions permitted, it is possible that it will be some time before sufficient stability is achieved to enable us to return to gold and that, in the meantime, stability, both for this country and for other countries which are faced with the same problem, may be achieved in quite another way, viz., through the establishment of a powerful *Sterling Group* of currencies, by agreement between a group of countries to maintain fixed rates of exchange with one another. There would be a managed international standard based on no common measure, neither gold nor silver. Within the group there would be only one currency policy; no member would pursue an independent policy, and there would be none of the competition between the currencies of the members of the group which has been responsible for so much ill-feeling.

Consciously or not, Great Britain has demonstrated that price stability can for the time being be achieved more readily under a régime of management or control than it can by maintaining the gold standard. Since our suspension of the gold standard in 1931, the sterling price level has remained stable, although the sterling exchange rates have fluctuated, but the price level in gold standard countries continued for some time after the crisis to show a downward tendency. Indeed, a comparison between this country and gold standard countries shows that, at the time of writing, conditions here are better than they are in the gold standard countries, thus apparently substantiating the contention that a stable price level is more beneficial than exchange stability. It is for these reasons that several foreign countries have sought to achieve price stability by joining the sterling group instead of remaining true to gold.

Already most of the countries of the Empire are more or less definitely linked to sterling, while several of the other countries which

followed Britain off gold (notably Egypt, Portugal and the Scandinavian countries) have linked their currencies to sterling and have made clear their intention of remaining off gold so long as Britain is in that position. In some cases the link has been established by law, whilst in others it has not; but in all cases the policy has been adopted on the grounds of commercial or financial expediency as, for instance, in the case of the Scandinavian countries.

If this tendency continues and the sterling group extends, it is by no means impossible that we may have at least for some years to come an international monetary system based, not on gold, but on a controlled sterling currency.

A Sound Money Policy.—At the moment, as we have endeavoured to show in this chapter, there are in operation three conflicting policies, each aiming at the establishment of sound money conditions, and each having powerful and staunch adherents. There is the declared policy of the United States, which seeks to establish a dollar that shall have the same purchasing power a generation hence as it has now. Secondly, there is the policy of the "gold bloc" countries, whose adherents have declared their intention to maintain the gold standard at the present rate of parity; and, thirdly, there is the "sterling bloc", which is really an international standard based on the pound sterling.

Both the "gold bloc" and the "sterling bloc" favour *international* co-operation and an international monetary policy, whereas the United States is concerned more with raising its own price level by *direct internal* action than with *international* reactions. It is obvious that each of these three groups, in seeking to establish its policy, must come into conflict with the others, and so accentuate existing financial disturbances. While the antagonism between them continues there can be little hope for the establishment of sound money conditions, and attempts to restore economic prosperity can meet only with failure. What the outcome of the struggle will be is a matter for conjecture.

So far as Britain is concerned, the present position is both artificial and abnormal. Her great economic past has been built up on the solid foundations of the gold standard, and it does not seem possible that her future can be assured unless sterling and gold are again made synonymous. Britain, internationally situated as she is, cannot isolate herself financially from the rest of the world by the institution of an independent currency system.

One thing is certain; if we in Britain decide to re-establish the gold standard, we must, before taking the final step, establish conditions

which will enable it to function satisfactorily. Amongst other things, it is essential that the present artificial barriers to world trade should be broken down and that a satisfactory settlement of war debts and reparations be concluded. Secondly, gold must be allowed to flow *freely* between the gold standard countries, and so to exercise its adjusting influence on domestic price levels. Thirdly, the great central banks must co-operate closely to ensure harmony between the monetary policies of the various nations, and, in particular, with the direct object of remedying the present serious disparities in costs, prices and wages, by bringing about a rise in world prices, without which it would seem impossible for the volume of world trade and industry to be restored with any hope of permanence. Fourthly, there must be a revival of international investment, and, as this involves a return of confidence, everything must be done to remove the present financial chaos; nothing less than a complete overhaul of Government and private budgets will restore the faith of potential lenders. Finally, if devaluation of sterling and of other currencies proves to be necessary (as it is not unlikely that it will), no attempt should be made to fix permanently the new gold values until a period of stabilisation has proved satisfactorily at what levels devaluation can be effected in the various countries in the best interests of the world as a whole. A competitive race in devaluation must at all costs be avoided, for its results would be as detrimental as a recrudescence of tariffs and restrictions. Hence, countries which play an important part in world trade should endeavour to reach agreement on the new values for their currencies, and those values should be fixed at levels which are appropriate to their internal costs and prices. The extensive errors of post-war stabilisation must on no account be repeated.

It does not seem possible that we can again establish gold as the basis of our currency and credit system unless we are assured of the majority, at least, of these safeguards. To attempt a return to gold under any other conditions would be merely to court a repetition of the turmoil of 1931, with the likelihood that we should not again be able so successfully to negotiate the tremendous obstacles with which we were then confronted.

CHAPTER XXI

THE ELIMINATION OF RISKS CONNECTED WITH FOREIGN TRADE AND EXCHANGE

EVEN at the best of times, international business bristles with difficulties. It involves agreement between two persons who have to overcome not only the factor of distance and the uncertainty which distance entails, but also the complications which necessarily arise from differences in race, language, law and business customs. Moreover, distance usually means time, and the time element is vital where credit is concerned. A business deal may seem sound enough when it is first effected and for some months afterwards. But when fulfilment is called for and settlement is required, conditions may have changed to such an extent as to make completion impossible. Political unrest, a collapse of credit, the outbreak of war, the failure of a harvest, or disordered exchanges are all matters within the bounds of possibility which may make a contract quite incapable of performance, however good the intentions of the parties. And finally, there are the risks of physical misadventure to the goods concerned which, particularly in the case of overseas business, may arise in a hundred different ways.

Small wonder, then, that traders in all countries have in recent years shown themselves increasingly disposed to take advantage of any facilities which will foster international business and relieve foreign trade and exchange of some of the risk with which it is naturally invested. These risks fall into three groups: (a) those inseparable from the process of exchanging one currency for another; (b) those inseparable from all trade, i.e., that goods paid for will not be delivered, and that goods delivered will not be paid for, owing to the failure of the credit of the other party to the transaction, or for any other unforeseen reason; (c) the risks of loss, delay, or damage to goods in process of transit between one country and another.

THE ELIMINATION OF EXCHANGE RISKS.

The most general risk attending foreign trade arises from the fact that an exchange of goods between any two countries involves the

translation of the currency of one country into that of the other. The importer in this country buys his goods and calculates his profit on the basis of payment in sterling, whereas the exporter in, say, Holland or India, fixes his sterling selling price on the basis of his own currency, florin or rupee, as the case may be.

Clearly, the risk is not very considerable between two currencies which are properly functioning on a gold standard, for the extreme variation which can take place in the exchange rates is represented by the margin between the export and import specie points, and, in many cases, the contract price fixed between importer and exporter may adequately provide for any such movement. But, in other cases, the margin of possible profit may be so fine that some means must be found of safeguarding the parties against the likelihood of exchange loss, and such a safeguard is, of course, doubly necessary when the value of one currency in terms of the other is an uncertain quantity, as when one or both are depreciated through the issue of inconvertible paper, or when the two currencies concerned are based on different metallic standards, as, for example, silver and gold.

It is fortunate for the trading community that bankers throughout the world have applied themselves to the provision of facilities whereby the risks of exchange loss may be entirely eliminated, with little or no cost to the parties concerned.

The Standpoint of the Exporter from this Country.—If, for clearness, we confine our attention at the outset to the standpoint of an exporter from this country, we find that he may adopt one of three possible methods of safeguarding himself against exchange loss:

- (a) If he has arranged to sell and be paid for his goods *in sterling*, he will draw a bill for the sterling amount on the foreign importer and, as is usual, enface the bill with an exchange clause fixing the rate at which it is to be paid to the collecting banker.
- (b) He may agree to accept payment in foreign currency, in which case he can arrange with his banker, at the time he quotes for the goods, the rate of exchange at which the bank will buy the foreign currency *forward*; i.e., at the time he contracts to supply the goods he arranges the rate at which he will sell the foreign currency when it is delivered to him by the importer abroad.
- (c) *In certain special circumstances*, he may obviate exchange loss by having any foreign currency due to him credited to a Foreign Currency Account opened by the Foreign Branch of the bank at his request and in his name.

Exchange Clauses.—The object and effect of various types of exchange clauses have been briefly explained in Chapter VII. The only point which requires to be emphasised is that foreign importers will not, at the present time, always pay a bill in accordance with an exchange clause unless they have previously contracted to do so. In pre-war days, there was rarely, if ever, any question about the matter. The English exporter merely drew his bill, embodied an exchange clause recommended by his banker, and trusted to the fact that the foreign drawee would not object. Nowadays, however, the position is not quite so easy. On occasion, foreign drawees have refused to pay at the required rate when they have found that the exchange clause reacted to their disadvantage by compelling them to accept from the collecting banker a less favourable rate than they could obtain elsewhere, a position which arises, more especially, when the exchange rate concerned is subject to marked fluctuation. For this reason, it is essential that an exporter who proposes to draw in sterling should make precise arrangements as to the method of payment at the time he effects the contract of sale.

The use of the exchange clause on a sterling bill does not, of course, afford any protection to the foreign *importer* against movements in the prevailing rate. Subject to the considerations above mentioned, his payment must be effected in accordance with the provisions of the bill at the time it is presented for payment, and, unless he has taken steps to safeguard himself (as by a forward operation in the manner described below) he must, of course, bear any loss which may arise if the exchange has moved against him between the date on which his purchase was made and the date of payment.

Forward Contracts.—By far the greater proportion of exchange risks which arise from the necessity of having to receive or to pay money on a specified future date are eliminated by resort to the forward exchange facilities now provided by banks in all the leading countries. As was explained in Chapter XI, the unprecedented fluctuations in the exchanges during and after the Great War gave a great impetus to the development of the forward market, and enlightened traders of all nations as to the exceptional advantages afforded by the machinery of that market. To the extent that he could draw in sterling and utilise an exchange clause, the British exporter was protected against fluctuations in the sterling value of a foreign currency; but that method afforded no safeguard to the importer abroad. By the system of forward exchange, however, the positions of both home and foreign trader, whether exporter or

importer, can be equally protected, as will be clear after consideration of a few practical examples.

Forward Exchange and the Importer.—Assume that when the sterling exchange rate on Paris stands at Fcs. 125 per £1, a London merchant orders from a Paris manufacturer a parcel of goods valued at Fcs. 125,000, which he at once sells in London for £1,040, and thus makes an apparent profit of £40 as a result of the deal. The goods are made and delivered, and, in accordance with the standing arrangement for a month's credit between himself and his correspondent in Paris, the London merchant proceeds to effect payment for the goods at the expiration of one month from the date of the order. On approaching his banker, however, the merchant finds that the Paris rate has moved to Fcs. 120 per £1, and, in consequence, he has to pay £1,042 for his remittance of Fcs. 125,000. Thus, what was an apparent profit at the date of the purchase and sale turns out, in fact, to be an actual loss of £2.

To avoid such a risk, therefore, the London merchant resorts to a forward deal with his banker. When he gives the order for the goods, he arranges to buy from his banker, one month forward, Fcs. 125,000 at the existing forward rate, say, Fcs. 124·75 per £1. At the time of settlement, the merchant pays the banker £1,002, and, irrespective of what the rate then happens to be, receives in return a sight draft or cheque on Paris for Fcs. 125,000, which he remits to the French manufacturer. In this way, the London merchant safeguards his profit on the purchase and sale of the goods, and also relieves himself of all anxiety concerning fluctuations in the exchange between London and Paris.

By way of further illustration we may suppose that a merchant in Manchester has purchased \$20,000 worth of cotton from a merchant in U.S.A., and has arranged to make the payment in New York three months after date of the order. The Manchester merchant wishes to arrange the sale of the cotton before it actually arrives, and to do this he must quote a firm price to the buyers. As, however, the dollar exchange may have moved very considerably by the expiration of three months, he will have some difficulty in determining *now* how much sterling he will be called upon to pay in three months in order to settle his debt of \$20,000 in New York. If, for example, the exchange when he orders the goods stands at 4·89, but, by the time he is called upon to pay, has fallen to 4·84, the fall in the rate would make a difference of about £42 in the sterling equivalent of the amount due to his creditor. Naturally, this is a loss which a merchant could not generally stand on a contract of such a size.

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To obviate any such loss he makes a forward contract with his banker, on the day that he orders the goods, whereby the latter agrees to accept a given sum in sterling in three months' time for the delivery at that time of \$20,000 to the New York exporter. In other words, the banker contracts to deliver \$20,000 in three months' time at a rate of exchange which is fixed *now*, so that the merchant knows exactly how much sterling he will be called upon to pay, while his foreign creditor will in due course receive the \$20,000 due to him without any loss due to exchange fluctuation.

These examples serve to explain that, in the absence of some such arrangement, an importer who orders goods on the basis of payment in foreign currency can never be certain how much he will be called upon to pay when the time of settlement arrives. If he orders on the basis of an exchange rate ruling to-day, he may find that when he comes to pay in two or three months' time the rate of exchange has moved against him, and the sterling cost of his purchase has so increased as to wipe out part or all of the anticipated profit. But having arranged with the banker that he shall be supplied with the requisite currency at a fixed price, he is enabled to fix up his contracts with the confidence that he will not be called upon to pay more than that rate, whatever the state of the exchanges may be when the time comes for payment. He settles at once the sterling cost of goods which he is purchasing abroad, and can proceed, without risk, to fix his selling price to purchasers here. If he is a factor, he can fix his selling price to the wholesale houses; if he is a wholesaler, he can fix the price at which he will sell to the retail dealers. He thus assures himself a reasonable profit and avoids the possibility of making either unexpected profits or disastrous losses through unforeseen movements in the rates of exchange.

Forward Transactions avoid a Lock-up of Funds.—The observant reader may, at this stage, wonder why the importer, in the examples postulated, should not avoid the risk of exchange fluctuations by buying the foreign currency immediately he enters into these transactions. He could, it is true, buy spot currency in this way, and so avoid any risk. But by so doing he would be locking up part of his funds and thus depriving himself of the benefit of the credit extended to him by the foreign trader. We may say, therefore, that forward exchange transactions by importers save them from unnecessarily tying up their funds in foreign currencies.

Forward Exchange and the Exporter.—Forward operations are of just as much benefit to the exporter. Let us illustrate this side of

the question by taking the case of a South Wales coal factor who has accepted a contract to supply a given quantity of coal to a European country whose currency is subject to marked fluctuations, as, for example, Spain, at the time of writing. The contract may be for a fixed quantity to be delivered in one shipment on a certain future date, or it may be for periodical supplies throughout a given period, as, for example, so many tons per month for six months. In any case, it is quite likely that the contract is fixed up before the coal is actually brought to the surface, yet the price per ton must, of course, be agreed upon at the time of the bargain. If, as is most usually the case nowadays, the arrangement is that the coal shall be paid for in the currency of the importer, then the exporting factor can safeguard himself from loss occasioned by future movements in the value of the peseta only by arranging at once with his banker the rate at which the latter will convert the anticipated future payments into sterling. If only one shipment is involved, the bank will arrange to purchase the peseta payment at an agreed rate. If payments for successive shipments are to be made from time to time by the Spanish importer, then the bank will arrange to purchase the various amounts of pesetas, either at differing rates or at one rate applicable to all deliveries of pesetas by the factor during a given period, e.g., the following six months.

By an arrangement of this kind, the exporter is enabled to fix at once the sterling equivalent of the peseta payments to be made to him on account of the coal exported, and can proceed to purchase the required quantities of coal from one or other of the colliery companies on the best possible terms. When the pesetas are received, whether in the form of bankers' drafts, M.T. or T.T., from Spain, they are paid over by the factor to his bank, and his account is credited at once with the sterling equivalent at the agreed rate.

It is possible, of course, that a transaction of this type may be arranged on the basis of settlement in sterling, as, for example, by the exporter's draft in sterling either direct on the importer or on a bank under a letter of credit, or by the importer's remittance of a sterling draft on a London bank. In such circumstances, the coal factor would be placed in practically the same position as if he had effected a sale to someone in this country, and it would devolve upon the Spanish importer to safeguard himself against exchange loss by purchasing forward the requisite amount of sterling.

Again, a British mercantile house exporting goods on consignment may wish to convert the net proceeds into sterling from time to time, and, in order to avoid loss from movements in the rates of exchange,

may resort to forward sales of the anticipated amounts in the foreign currency. Suppose that a London firm exports goods on quarterly consignment to an agent in Chile and that the approximate net receipts from the sale of the goods total about 10,000 Chilean dollars every three months. As soon as the goods are exported, the London firm arranges a forward sale of the anticipated proceeds, \$10,000. At the expiration of the period fixed, the dollars are handed by the agent to the banker's correspondent in the foreign centre and the sterling equivalent is paid over to the firm in London.

Other Applications of Forward Exchange.—Apart from its application to ordinary trade operations of the kind here explained, forward exchange is of the greatest advantage in other directions. The British and other Governments have had to make heavy purchases of dollars from time to time in order to make payments on account of war debt and interest in New York. With the object of avoiding the dislocation of the exchanges which would result from heavy purchases *at one time*, the requisite amounts of dollars have been purchased and accumulated more or less continuously, "outright" forward purchases being frequently resorted to according to the current view taken by the Treasury officials of the probable future course of the exchanges.

We have seen, too, that the system of forward exchange is utilised to secure the exchange risk when funds are deposited (for *temporary* investment) in a foreign centre, that is, when sterling is converted into foreign currency and the latter is invested in the foreign centre (see Chap. XII). These operations are carried out chiefly by bankers, but even private investors can adopt the same practice, i.e., by selling foreign currency forward when they transfer their sterling into investments in foreign securities.

Forward Options.—Ordinary forward contracts require the delivery or acceptance of the foreign currency on a specified date. For example, a merchant who has \$10,000 falling due to him on 10th June, and who effects a sale of the dollars one month forward on 10th May, contracts to deliver those dollars to his banker on 10th June. If the merchant fails to deliver on that date, the banker will buy the currency in against him at the ruling spot rate on the day of delivery, and will charge him with any resultant loss or credit him with any resultant profit. But if later the merchant receives the dollars due to him, he will still need to convert them into sterling, so that, if he receives payment, say, on 16th June, he must sell his dollars at the ruling spot rate on that day, and he will, of course, incur a loss if the rates have gone against him.

Now it will be clear that many merchants cannot *definitely*

undertake to deliver foreign currency on a certain specified day. For example, an English exporter may sell goods to Canada, shipment to be made during June, payment 30 days after date of shipment. He makes his contract early in May, and knows that he can manufacture the goods and have them ready for shipment during June; but he cannot be *certain* that they will be ready on *any specified day* in June. If other orders are slack he may have them ready during the first week; if other orders are fairly heavy, he may not be able to ship them until the last week.

Let us assume that the exporter has sold his goods at a dollar price. Now he knows that he will receive his dollar payment, say \$20,000, sometime during July, and naturally he will wish to cover himself against exchange losses. But for obvious reasons an *ordinary* forward deal will be of little use to him. He can only be *certain* that he will be able to deliver dollars by the end of July. If he contracts to deliver on any other date he may be involved in loss. If he contracts to deliver on the last day of July and actually obtains payment earlier, he is left with idle funds for a certain time.

To meet such difficulties bankers have introduced what are known as "option forwards". Under an option forward contract the banker undertakes to deliver a specified sum in foreign currency to the customer, or to accept delivery of a specified amount of foreign currency from the customer, *at any time between two specified dates*. By such a contract the parties are as much bound as in an ordinary forward contract: the option is merely *as to the date* of completion of the contract, and is not in any sense an option as to whether the contract will in fact be fulfilled or be permitted to lapse. Thus, in the example quoted above, the merchant would contract to sell forward to his banker \$20,000 for delivery at his (i.e., the merchant's) option any time during July, and, assuming he makes the forward deal on 1st May, he would contract for an option *over the third month*.

The ordinary forward deal requiring delivery on a specified date is often called "fixed forward", or "one month forward *fixed*", to distinguish it from the forward option.

When a banker is asked to quote a customer for a forward option he will base his quotations on the current market rates for fixed forward deals. By way of illustration, let us assume that the following are the current quotations in London on New York:—

Spot ..	..	..	..	..	..	5-10-5-14.
Forward, 1 month	..	..	..	..	..	5-6c. discount.
„ 2 months	..	..	..	..	..	10-11½c. „
„ 3 months	..	..	..	..	..	15½-17c. „

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Calculating in the manner explained on page 253, we see that the rates at which the banker can deal without profit are:—

	Buying	Selling
Spot	5·14	5·10
1 month forward fixed	5·20	5·15
2 months forward fixed	5·25½	5·20
3 months forward fixed	5·31	5·25½

If we assume the banker takes ½c. in the rate, the rates he will be willing to quote to his customer will be:—

	Buying	Selling
Spot	5·14½	5·09½
1 month forward fixed	5·20½	5·14½
2 months forward fixed	5·26	5·19½
3 months forward fixed	5·31½	5·25

Now, if a customer sells his banker forward dollars for delivery at his option during the following month, the banker undertakes to buy those dollars from him at the agreed rate, *at any time during the month*. Hence the customer can elect to deliver the dollars on the first or last day of the month or at any intervening time during the month. Thus the banker knows that the customer can deliver, *at the earliest*, at once, and *at the latest*, at the end of the month, and as these represent the two extremes of option granted to the customer, a consideration of the rates applicable to those dates will enable the banker to fix his rate for the contract.

Taking the rates given above, we see that the banker's buying rate for spot—the rate applicable if the customer delivers at once—is 5·14½, and that the rate for one month fixed forward—the rate applicable if the customer delivers on the last day of his option—is 5·20½. Since the banker has to take the risk that the customer will deliver at any time during the option period, he will apply to the option that rate which is most favourable to himself; i.e., in the case in question he will quote 5·20½ as the rate for the forward option.

Working on similar lines for each of the other possible options, we arrive at the following option rates (quoted by a banker on 1st May):—

	Buying	Selling
1 month forward option (for delivery during May) ..	5·20½	5·09½
2 months forward option (for delivery during May or June)	5·26	5·09½
Option over second month (for delivery during June) ..	5·26	5·14½
3 months forward option (for delivery during May, June or July)	5·31½	5·09½
Option over second and third month (for delivery during June or July)	5·31½	5·14½
Option over third month (for delivery during July) ..	5·31½	5·19½

If dollars are *at a premium*, the same principles will be applied. Thus, if the market rates on 31st May are spot 4·98-4·99, forward 1 month, 3-2c., 2 months, 6-4½c., 3 months, 9-7c. premium, and if, as before, the banker requires ½c. in the rate, the rates he will be willing to quote his customer will be:—

	Buying	Selling
Spot	4·99½	4·97½
1 month forward fixed (delivery on 30th June) ..	4·97½	4·94½
2 months forward fixed (delivery on 31st July) ..	4·95	4·91½
3 months forward fixed (delivery on 31st August) ..	4·92½	4·88½
1 month forward option (delivery during June) ..	4·99½	4·94½
2 months forward option (delivery during June or July)	4·99½	4·91½
Option over second month (delivery during July) ..	4·97½	4·91½
3 months forward option (delivery during June, July or August) ..	4·99½	4·88½
Option over second and third month (delivery during July or August) ..	4·97½	4·88½
Option during third month (delivery during August) ..	4·95	4·88½

Option forward rates can be ascertained on similar principles for *pence* rates, i.e., rates quoted in pence per foreign unit, but as there is relatively little forward dealing in currencies so quoted, forward quotations for *pence* rates are rarely given in the Press, though they are readily quoted by banks which transact Eastern business.

Forward Deals are Definite Contracts.—Whilst a forward deal may give one party an option as to the *date* of delivery or acceptance of the currency concerned, it is never an option in the sense that it may or may not be ultimately completed. It is a definite contract between two parties—the one undertaking to pay sterling and to accept currency at an agreed rate at some determinable future time, or within a given period, and the other party agreeing to pay over the currency and to accept the equivalent amount of sterling. If either party fails to carry out his obligation, he is liable for any loss which may fall on the other party in consequence of the breaking of the contract, which means, in practice, that the latter is entitled to “buy in” or “sell out” in the Market at current rates and to claim reimbursement from the defaulter.

In practice it often happens that a customer, when entering into a forward contract, does not know *exactly* how much currency he will have to receive or to pay, and it is therefore usual for the banker to allow him a margin of 5 % either way. Another respect in which the banker allows his customer latitude is by permitting him to complete an option contract in *instalments*, provided they come within the option period.

As a rule, no money passes between the parties to a forward trans-

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action until the foreign currency is delivered by one party to the other on the maturity date of the contract. But, in undertaking forward business for his customers, a banker must necessarily be guided by the credit and standing of the other party to the transaction, otherwise he may be involved in serious loss by the failure on the part of his customer to accept or to take up the currency on the maturity date in accordance with the arrangements. For this reason, properly completed contract forms are signed by the customers, and, in addition, a sterling deposit may be demanded in certain cases as security to cover the risk involved, especially when the exchange concerned is subject to marked fluctuations. The amount of the sterling deposit required will usually be fixed as a certain definite percentage, say, 10 % or 15 % of the amount involved. Usually the customer is expected to *maintain* the margin, that is to say, if on any particular date during the currency of the contract the value of the currency moves £100 against the customer, the bank usually has power to demand a further £10 (or £15) deposit in cover.

Reproduced below are specimens of the forms of contract used in one of the large joint stock banks to cover *a series* of forward transactions between customer and bank. Similar but less comprehensive forms are used for isolated transactions.

GENERAL CONTRACT FORM FOR FORWARD PURCHASES BY A CUSTOMER.

TO THE LOMBARD BANK, LTD.

DEAR SIRs,

We agree that orders which we have given you, or may hereafter give you, from time to time, for the purchase of Foreign Currency, shall be subject to the following conditions:—

- (1) We will accept delivery of such Currency in accordance with the terms of our contract and undertake to provide you with the necessary funds in sterling, and if for any reason we fail to do so we authorise you to sell such Currency in the open market, and we undertake to reimburse you in sterling for any loss you may suffer in connection therewith.
- (2) If at any time before we accept delivery of such Currency the value of the Currency shall have depreciated as shown by the quotation in the *London Times Newspaper*, We will pay you on demand such sum of money as will cover such depreciation, provided that in the event of our completing the contract such sum of money shall be applied in part payment for the Currency at the original contract price.
- (3) We authorise you to debit our Account with all payments you may make from time to time in connection with any such contract.
- (4) Should we instruct you to remit any such Currency abroad we agree that it shall be remitted at our risk, and if held on our behalf by your Agents abroad it shall be so held at our entire risk and responsibility.

Yours faithfully,

James Brown & Co.

Date.....

GENERAL CONTRACT FORM FOR FORWARD SALES BY A CUSTOMER.

TO THE LOMBARD BANK, LTD.,

DEAR SIRS,

We agree that sales of Foreign Currency which we have made to you, or may from time to time make to you, shall be subject to the following conditions:—

- (1) We will make delivery of such Currency in accordance with the terms of our contract, and if for any reason we fail to do so you are authorised to buy such Currency in the open market and we will reimburse you in sterling in respect of any loss you may suffer in connection therewith, and you may debit our account with such loss.
- (2) If at any time before we make delivery of such Currency the value of the Currency shall have appreciated as shown by the quotation in the *London Times Newspaper*, we will pay you on demand as security such a sum of money as will cover such an appreciation, but such sum shall be returned to us on our completing the contract at the agreed rate in due course.

Yours faithfully,

James Brown & Sons.

Date.....

Foreign Currency Accounts.—The method of eliminating exchange risk by the opening of a Foreign Currency Account (described on page 159) is of comparatively restricted application. Although the system possesses great advantages, *it does not entirely eliminate exchange losses.* A debtor who covers his exchange risks by a spot purchase as soon as the debt is incurred is in the position of paying cash for his purchases, and this may involve a considerable loss of interest on the capital locked up, since the interest allowed on his holding of foreign currency will probably be at a very much lower rate than the same capital would earn in his business. As regards the creditor, he avoids a loss in exchange only if he can convert the foreign currency at a rate *at least as favourable* as that prevailing when the debt to him was incurred, or if he can use the foreign funds at least as profitably abroad in the purchase of goods, services or securities, as he could have done at home had the debt been paid in his own currency.

For these reasons it is usually better for an exporter or importer to sell or buy *forward* exchange and thus fix the rate for conversion of currency on the basis of the current rates, upon which his prices will have been based. The system of keeping currency accounts is, however, of value to merchants who both import from and export to a foreign country, as, by having the proceeds of their exports credited to a foreign currency account, they can utilise them to effect payment for their imports from that country, and thus save the profit made by the exchange dealer. This method does not, however,

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obviate all exchange dealings, as it is unlikely that a merchant's imports and exports will be exactly equal: either the balance due in respect of excess imports must be purchased and remitted, or the balance due in respect of excess exports must be converted into sterling through the medium of the exchange dealers.

When used in this manner the system of foreign currency accounts is clearly of value, and is frequently used by merchants trading with the Dominions. But even in such cases these merchants negotiate both their outward and homeward bills in order to obtain the benefit of bank finance for their shipments, which they evidently consider to be well worth the small additional expense entailed by the dealer's "turn". The practical value of such accounts is therefore limited to those concerns possessing good financial resources who can finance their shipments either from their own liquid reserves or by means of bank overdrafts or loans.

THE ELIMINATION OF CREDIT RISKS

The fact that a merchant may free himself from the risk of loss through movements in the rates of exchange by taking advantage of the facilities described in the foregoing paragraphs does not, of course, prevent him from incurring loss through the failure of a foreign importer to pay what is due. Even this difficulty, however, is to a very large extent overcome by the use of Letters of Credit, whereby the reputation of well-known banks and accepting houses is made available to reinforce the credit of buyers and sellers.

Apart from thus providing credit facilities with benefit to both importer and exporter, the banks also undertake a variety of allied functions which ensure, on the one hand, that goods can be claimed only if payment therefor is duly made, and, on the other hand, that an importer obtains those goods, and only those goods, for which he has properly paid. In addition, they provide credit facilities for people, other than traders, who wish to purchase from other countries, not material goods, but the services afforded to them as travellers by railways, hotels and so on.

Letters of Credit.—In general terms, a letter of credit is a document authorising the person in whose favour it is made to issue bills drawn on demand, or at a specified term, upon the issuer of the credit, the latter undertaking to honour the drafts, when presented, provided they are in good order and otherwise in accordance with the terms of the credit.

A letter of credit is neither negotiable nor transferable, and pay-

ment thereunder can be obtained only by the person in whose favour the document is issued.

Letters of credit issued in this country and abroad are variously described according to their terms and the facilities which they place at the disposal of the grantee, but all credits may be placed in two broad classes, viz., those which are *Bank Credits* and those which are not. Strictly speaking, the former comprise only those credits which entitle the grantee or beneficiary of the credit to draw drafts on the bank issuing the credit. The essential feature of a *bank credit* is that it involves the substitution of the superior credit of the issuing bank for the relatively inferior credit of the beneficiary, and any type of credit which does not embody this feature, even though it may be issued by or through a bank, is best not described as a *bank credit*.

By far the majority of credits are arranged through banks, even though they may not always carry an authority to the beneficiary to draw bills on the issuing bank, but occasionally the credit and reputation of a concern are so well known that its undertaking to accept and pay bills drawn by its correspondents will be honoured almost anywhere in the world, and, in such circumstances, the concern may itself issue letters of credit without resort to a bank. Such credits are usually described as *authorities to negotiate*, or *authorities to purchase*, or *negotiation credits*, but, nowadays, the facilities afforded by the banks throughout the world are so extensive that their services are usually requisitioned to make the necessary arrangements for a credit of even this kind (see *post*, page 514).

Benefits of Bank Credits.—By taking advantage of the facilities afforded by banks in the issue of credits, shippers, merchants and manufacturers can reimburse themselves promptly for shipments of goods, the production of which has involved a considerable outlay. They are relieved of the necessity of granting an extended personal credit which might cause them financial embarrassment; they obtain a bill which (by virtue of the bank's signature thereon) can be discounted at the lower rates applicable to bank bills, while they are afforded a speedy turnover of capital, and are so enabled to facilitate and cheapen production. On the other hand, importers are relieved of the necessity of having to pay cash before their orders are executed, and are consequently saved the disadvantage of being out of their funds during the time taken to produce, transfer, work up and sell the goods ordered by them from abroad. Frequently, importers who rely on bank credits are able to realise their goods long

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before the maturity of the relative drafts. The fact that a bank of established reputation is willing to open a credit in an importer's favour is in itself a commendation, while, in the case of a documentary credit, the importer has the satisfaction of knowing that the documents relating to his goods have been carefully examined by the bank or banks concerned. He is assured that they are *prima facie* in order before he pays over the invoice value, and, when he receives the goods, he may reasonably expect to find that they conform to his order and instructions to the exporter.

In brief, a bank credit affords essential protection with a minimum of trouble, delay and expense to both parties, and, at the same time, permits them to utilise their capital in their respective businesses to the greatest profit.

Types of Bank Credits.—All bank credits may be roughly classified into two broad groups: (a) *Non-commercial* credits; and (b) *Commercial* or *Trade* credits.

Non-commercial Bank Credits are those which are issued mainly with the object of enabling customers who intend to travel abroad to obtain funds in a foreign country or countries, as and when required, on the strength of an instrument or authority issued by and under the signature of the issuing bank, the main object being to obviate the necessity of carrying unnecessarily large sums of money from place to place. They include Travellers' Letters of Credit, Travellers' Cheques, Circular Cheques and Circular Notes.

Commercial or *Trade Bank Credits* are those which are issued mainly for the purpose of facilitating the transfer of goods, by virtue of the fact that they reinforce the credit of relatively unknown merchants and traders by the credit of a bank of known repute. The various types of Commercial Bank Credits will be more fully considered in the next chapter.

NON-COMMERCIAL BANK CREDITS.

Travellers' Letters of Credit.—This type of credit takes the form of a letter addressed by the issuing bank to its agents or correspondents, in which the latter are requested to encash the holder's cheques or drafts on the issuing bank up to a specified amount, the issuing bank undertaking to honour the instruments on presentment in due course. As a rule, these credits are issued only to customers of the issuing bank, or to parties who are satisfactorily introduced, while the deposit of the full amount involved is required, unless satisfactory security is

available, or unless the customer's standing and account are such as to warrant the banker's dispensing with any such safeguards.

Some bankers make no charge for issuing credits, considering themselves adequately compensated for their trouble by the interest earned on the amount deposited, though even these bankers will usually make a small charge where the amount involved is too small to compensate them for their trouble. Other bankers regularly charge $\frac{1}{2}$ % on the amount involved, or $\frac{3}{4}$ % if the credit is issued against a guarantee.

Limited or Special Travellers' Letters of Credit are available only at a *specified* agency, or at specified agencies, of the issuing bank, and in such cases the agents concerned are advised direct of the issue of the credit and are furnished with a specimen of the holder's signature; in this case no Letter of Indication (see below) is required.

Usually a credit of this nature consists of a letter from the manager of the issuing bank stipulating the amount that the customer may draw per day, week or month. Such a letter commonly includes an introduction of the customer to the foreign correspondent, acquainting the latter with the purpose of the customer's visit and asking him to give his assistance to the customer in any way that may be possible. When, for instance, the customer is on a business trip, it is very probable that the correspondent banker may be able to introduce him to prospective clients and in other ways assist him in his business.

Frequently, Travellers' Letters of Credit fall within the category of *Circular or General or World-wide Letters of Credit*, in which case they are available at *all* foreign branches or agencies of the issuing bank, a list of which is handed to the customer in the form of a general *Letter of Indication*. This bears the signature of the holder (signed in the issuing banker's presence) for purposes of comparison, and contains a request, signed by authorised officials of the issuing bank, that funds up to a specified limit shall be placed at the disposal of the beneficiary, against his cheques or drafts on the issuing bank, drawn within a given period, usually not longer than six months.

The object of the Letter of Indication is, of course, to obviate the necessity of advising each correspondent with whom the credit is available, and of providing each correspondent with a specimen signature of the customer, but it is essential that it should be kept apart from the Letter of Credit, otherwise they may be misused in the event of loss of both together. For the same reason, these documents are always sent separately if it is necessary for them to be forwarded

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by post, the Letter of Credit being sent first and the Letter of Indication being sent only when the bank has been advised of receipt of the credit.

Travellers' Letters of Credit may be issued in sterling or in foreign currency, according to the wishes of the customer, but, as a rule,

WORLD-WIDE CIRCULAR LETTER OF CREDIT.

THE LOMBARD BANK LIMITED.

No. 1695.

£1000

HEAD OFFICE, BISHOPSGATE,
LONDON, 17th August, 19..

To the Branches and Correspondents of the Bank.

GENTLEMEN,

This Letter of Credit should be presented to you by *Mr. James Brown*, to whom you will please furnish such funds as *he* may require to an amount not exceeding in the aggregate £1000 (say *One thousand Pounds Sterling*) against *his* Sight Drafts upon this Bank, each Draft bearing the clause "Drawn against L/C. No. 1695."

We hereby engage that all such Drafts shall meet due honour if negotiated within a period of *Six Months* from this date.

All payments made under this Credit must be inscribed on the back hereof, and this letter itself should be cancelled and attached to the final Draft exhausting the amount.

The holder's signature will be found on the Letter of Indication with which he has been furnished and you are requested to satisfy yourselves by a reference *thereto* that payment is made to the proper party, the Drafts being signed in your presence.

We are, Gentlemen,

Your obedient Servants,

The Lombard Bank Ltd.

William Andrews,
Secretary.

Henry Robinson,
General Manager.

[On the Back is printed:]

SUMS DRAWN UNDER THE WITHIN CREDIT

Date when paid.	By whom paid.	Name of town.	Amount paid expressed in words.	Amount in figures.		
				£	s.	d.

those issued in this country are available in *sterling* cheques or drafts. In such cases, the cashing agent may charge a small commission for his services, but, more usually, as where reciprocal *free* agency agreements exist between the banks concerned, the cashing agent will take his profit in the rate of exchange at which he purchases the sterling drafts from the traveller.

The credit will prescribe the method by which the cashing agent abroad is to obtain reimbursement. In some cases, he will be empowered to do so through the central agent of the issuing bank in the country wherein the credit is available, in which case the central agent concerned will be advised of the issue and details of the credit, and furnished with specimen signatures of the holder. More com-

LETTER OF INDICATION AND LIST OF CORRESPONDENTS.

THE LOMBARD BANK LIMITED.

No. $\frac{W}{W}$ 1797.

LONDON, 17th August, 19..

To the Branches and Correspondents of the Bank named in the following pages.

GENTLEMEN,

This book has been issued to *Mr. James Brown*, whose signature is given below and who holds our Circular Letter of Credit No. 1695.

Please negotiate drafts on us drawn in accordance with the credit, the drafts to be signed by the above in your presence.

Yours faithfully,

For The Lombard Bank Ltd.,

Henry Robinson,
General Manager.

Specimen Signature of
James Brown.

TO THE HOLDER.

It is absolutely imperative that the holder should immediately on receipt of this Letter of Indication and Circular Letter of Credit, affix his or her signature to the Letter of Indication below as a protection against forgery should the Letter of Credit fall into improper hands, and the Letter of Indication should always be kept apart from the Letter of Credit.

When no longer required the Letter of Indication should be returned to the Bank.

This List and the relative Circular Letter of Credit are issued and accepted on the condition that should the Circular Letter of Credit be presented for payment together with this List by an unauthorised person, the loss, if any, shall fall exclusively on the person to whom the same are issued. See Notes on following page.

[A List of Agents and Correspondents follows.]

monly, the agent will be instructed to recoup himself by debiting the issuing bank with the drafts, which he will forward to the latter.

Before making a payment against a credit, the foreign agent carefully examines the document to verify its genuineness and to ascertain its terms, after which he compares the signature of the holder to his cheque or draft (which must be signed in the agent's presence) with the signature on the letter of indication or with the specimen signature sent to him by the issuing bank. Moreover, he ensures that each cheque or draft encashed is clearly marked with the number of the Letter of Credit, for purposes of identification by the issuing banker.

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All sums paid out against a Traveller's Letter of Credit are required to be clearly endorsed in a space provided on the back of the instrument (see the specimen reproduced on page 502), and every such entry must be authenticated by the stamp and signature of the paying agent. It is naturally of first importance that no payment should be made until the agent has ascertained that the period of the credit is unexpired and that it is still good for the amount demanded by the holder, otherwise the agent may himself be held liable for any excess. For this reason, any agent who pays over an amount which exhausts the total for which a credit is available should cancel the

TRAVELLER'S CHEQUE	
PAYABLE IN ALL COUNTRIES OF THE WORLD	
No. 1794	<i>Payable within Twelve months from (Date) 20th August, 19..</i>
Drawer's Endorsement.....	
<i>(To be signed in the presence of the Paying Agent)</i>	
To THE LOMBARD BANK, LIMITED	
LONDON, E.C.2	
Pay Self or Order	Signature of Drawer } James Brown,
Ten pounds	Witness to Signature of Drawer } William Thompson, Manager
£10	Northtown Branch.
OR THE EQUIVALENT ABROAD AT CURRENT RATES OF EXCHANGE.	

credit and attach it to the last cheque or draft encashed by him. Moreover, if he encashes a draft and fails to endorse the amount on the letter of credit, he must bear the resultant loss should the beneficiary (being of fraudulent nature) take advantage of his omission to encash further drafts beyond the amount authorised.

In due course the drafts issued by the customer will come forward from the issuing bank's foreign agent for payment and credit. If these are in *sterling*, the amount of each draft as it is received will be credited to the agent's sterling (i.e., *vostro*) account with the London banker. The corresponding debit will go either to the customer's ordinary current account, or to a subsidiary account credited by the bank with the total amount for which the Letter of Credit was first made available. If the drafts presented are in *foreign currency*, they

will be credited to the relative Foreign Agent's Account in the London bank's *nostro* ledgers, and the corresponding debit will go either to the foreign currency account of the customer, if he has one, or to a subsidiary account in that currency credited with the total amount of the credit on its issue.

Travellers' Commercial Letters of Credit.—The type of credit described above is commonly used by persons travelling for pleasure as well as for business purposes. But sometimes a business man goes abroad for the express purpose of buying goods, for which object he requires considerable funds. His banker can greatly assist him in this matter by issuing to him a Traveller's *Commercial Letter of Credit*, similar in all respects to that just described, except that it is available only on presentation of drafts with shipping documents attached. The precautions to be taken in regard to these documents are discussed fully in the following chapter.

Travellers' Cheques.—These are a modern and convenient development of the Traveller's Letter of Credit, consisting of cheques drawn on and bearing the imprint of the issuing bank, for certain round sums, handed to the customer in exchange for cash. They are signed by the customer on receipt in the presence of an official of the issuing bank, and also on encashment abroad in the presence of the paying agent, a comparison of the signatures affording a means of identifying the holder, who may, however, be required to produce his passport as an additional safeguard. Some banks furnish the holder of travellers' cheques with a Letter of Indication, but the more general rule is to provide the holder only with a list of the foreign branches and agencies of the issuing bank, particularly as no difficulty is experienced by travellers in cashing these instruments at tourist agencies, hotels and exchange bureaux, since payment thereof is guaranteed by the issuers. The agent who cashes a traveller's cheque forwards it to the issuing bank for reimbursement.

Some of these instruments bear an indication on their face of the equivalent value in various foreign currencies at which they may be encashed at the agencies of the issuing bank, but, in those cases where the amount in the issuing bank's home currency only is given, the usage is for the cashing bank abroad to pay the holder at its current rate for sight drafts or cheques on the place of issue.

As no Letter of Indication is issued with these cheques, and as the cheques themselves contain a specimen signature of the person entitled to cash them, they should be carefully safeguarded by the holder.

Circular Cheques.—These instruments, which were issued originally by banks in Continental countries, fulfil precisely the same functions as travellers' cheques, but certain distinct differences exist between the two forms.

Circular cheques are issued in blank by banks to their agents or correspondents abroad, so that the latter may fill them in as required and sell them to travellers about to visit the country of the issuing bank. On issue, the cheques are bound like ordinary blank cheques in books of 10, 20 and upwards. They bear the name of the issuing bank and are printed in different colours according to the maximum amount for which they may be drawn. For example, cheques printed in red must not be used for amounts in excess of 1,000 francs, and so on.

When the cheques are sold to customers in exchange for cash, the selling bank signs the forms and fills in the amounts in the same way as a bank's customer in this country draws an ordinary cheque. The selling bank advises the issuing bank of the numbers and amounts of the cheques issued, and also of the name of the person to whom they are sold. It also gives the issuing bank credit for the amounts drawn, and its Foreign Currency Account with the issuing bank is debited as soon as advice of the sale of the cheques is received.

As a rule, the back of each circular cheque bears a list of the most important branches and agencies of the issuing bank, at any of which the traveller can obtain cash in exchange for the instruments, so long as he can establish his identity, by his indorsement of the cheque, and, if required, by producing his passport or other evidence.

Circular Notes.—These instruments are very similar in effect to travellers' cheques. They consist of actual sight drafts on the issuing banker for certain round sums in the currency of the country of issue, being handed to the grantee in exchange for his cheque or cash for the equivalent amount. On the reverse side of each circular note is a letter addressed to the agents and correspondents of the issuing bank, specifying the name of the holder and referring to a Letter of Indication in his hands.

The Letter of Indication embodies a request to the issuing bank's agents and correspondents to cash the circular notes. It also contains a specimen signature of the grantee and particulars of the numbers and amounts of the circular notes issued in his favour. This letter must be retained by the holder until all the notes are cashed, but should be surrendered to the banker cashing the last note.

As a safeguard against loss and fraud the holder of circular notes should, as instructed thereon, always keep them apart from the Letter

THE LOMBARD BANK LIMITED.

No. 1793 London, E.C.
17th June, 19..

Circular Note for Ten Pounds Sterling.

GENTLEMEN,

This Circular Note should be presented to you by *Mr. James Brown*, whose signature appears on our Letter of Indication No. *108*, with which *he* has been furnished. Please pay *him* or *his* order the value of Ten pounds sterling at the current rate of exchange.

£10 : 0 : 0. We are, Gentlemen,
Your obedient Servants,

To the Branches and Correspondents The Lombard Bank Limited,
Henry Robinson,
General Manager.

of the Bank.

TO THE LOMBARD BANK LIMITED	
£10 : 0 : 0	London, E.C.
At sight pay to the order of ten pounds sterling for value received at the rate of	
(Holder's Signature) (Date)	

Sterling v. Currency Credits.—A traveller who requires a Letter of Credit to provide him with funds on his journey has the option of purchasing a credit in sterling or one in foreign currency. The question arises: "Which type of credit will be the least expensive?" A traveller who takes a currency credit and does not avail himself of the whole amount will have to sell the balance to his bank, possibly

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at a loss if sterling has appreciated meanwhile. On the other hand, a traveller who takes a sterling credit will be able to encash his drafts

LETTER OF INDICATION.

THE LOMBARD BANK LIMITED

No. 108

London, E.C.,
17th June, 19..

To the Branches and Correspondents of the Bank,
named in the following pages.

GENTLEMEN,

This Letter of Indication has been issued to *Mr. James Brown*, who holds our Circular Notes, numbered 1793-1842, payable at our head office, London.

We request you to purchase any of these notes presented to you for encashment at the current rate of exchange for sight drafts on London, on their being indorsed in your presence in accordance with the specimen signature given below.

Specimen Signature,
James Brown.

We are, Gentlemen,
Your obedient Servants,
The Lombard Bank Limited,
Henry Robinson, General Manager.

IMPORTANT

It is absolutely imperative that the holder should immediately on receipt of this Letter of Indication and relative Circular Notes, affix his or her signature to the Letter of Indication as a protection against forgery should the Circular Notes fall into improper hands, and the Letter of Indication should always be kept apart from the Circular Notes.

The Letter of Indication should be retained by the holder until all the Notes have been cashed, when it must be surrendered to the banker cashing the last note.

at a reasonable rate in practically any large foreign centre, since there is always a wide market for sterling. It may, however, pay a customer who intends to confine his travels to one country to take a credit in the currency of that country, especially if he is likely to need funds in the smaller towns, where the rates at which sterling drafts are purchased may be rather unfavourable. Moreover, by buying his currency in one sum, he is likely to benefit by obtaining a finer rate.

Again, there is nowadays the possibility that sterling may depreciate during the term of the credit; hence, it may pay a traveller who proposes to journey in, say, Western Europe to take a credit in French francs or Dutch florins, which are reasonably stable in relation to one another, and which can be exchanged without difficulty in practically any centre in Western Europe. The converse applies in the Scandinavian countries, where sterling is more stable in value than are dollars or francs, or any other gold currency.

CHAPTER XXII

BANK COMMERCIAL CREDITS

ALTHOUGH the classification of credits into the two broad classes, *Commercial* and *Non-commercial*, is a convenient one for our purpose, it is not intended to indicate that travellers' cheques, circular notes, etc., are never used for business purposes. On the contrary, they may be just as usefully employed by commercial travellers and business men as by people who are merely on pleasure bent. But these modified forms of credit are not so essentially utilised to facilitate the movement of goods and to finance other forms of business transactions as are the large and extremely important classes of commercial credits which we are now about to consider.

Irrevocable Bankers' Credits.—The Irrevocable Bankers' Credit is without doubt the most important of all forms of letters of credit. In its essentials, it consists of a written or cabled authority addressed by a bank, either directly or through an intermediary, to a specified person abroad (frequently a shipper or exporter) permitting the accredited party (otherwise the *accreditee* or the *beneficiary*) to draw bills of specified tenor on the issuing banker up to a stated limit, and embodying an undertaking on the part of the issuing bank to accept and, in due course, to pay those bills provided the stipulations of the credit are properly fulfilled.

The banker issuing an irrevocable credit gives his *absolute undertaking* to honour drafts drawn under and in accordance with the terms of the credit. Such a credit cannot be cancelled unless the beneficiary and *every interested party* (e.g., the holder of a bill drawn under the credit) agree to the cancellation. Consequently, a banker who is asked by a customer to cancel an irrevocable credit which he has issued at the customer's request must first obtain the consent of the beneficiary and of the banker through whom the credit was advised. To be safe, the banker should also require the letter of credit to be returned to him

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duly cancelled, for, if this precaution is neglected, the banker will be bound to honour any drafts negotiated by an innocent third party in reliance upon the credit. Furthermore, if any bills have been negotiated by the beneficiary before notice of cancellation is received and agreed to by him, the issuing banker must honour those bills, and he should be careful to retain the liability of his customer for them.

Should the beneficiary decline to agree to the cancellation, the banker must honour the undertaking contained in his letter of credit. If he fails to do so, he will be liable for damages for breach of contract to the beneficiary and to any holder of a bill drawn under the credit. These damages will, of course, be the face value of the bill.

This was exemplified in *Stein v. Hambros Bank of Northern Commerce*, 1921, where the defendant bank at the request of a customer issued an irrevocable credit in favour of Stein to cover payment for a shipment of hides. A dispute about the shipment arose between the bank's customer and Stein, and the former instructed the bank not to honour the draft drawn under the credit. The bank did as their customer asked, and Stein sued them for the amount of the draft. It was held that the obligation of the bank was absolute and was meant to be absolute, and judgment was accordingly given for the plaintiff, Stein. A similar decision was given in *Urquhart Lindsay & Co. v. Eastern Bank*, 1922.

Clearly, then, the great advantage of an irrevocable credit to the beneficiary is that he is assured that, so long as he complies with the terms of the credit, any drafts drawn by him in accordance with its terms will be honoured, and, in view of the absolute liability of the issuing bank for bills drawn under such a credit, the beneficiary is able to negotiate those bills more easily and at the finest rates.

Confirmed Bankers' Credits.—The question as to what is or is not a *Confirmed Bankers' Credit* is one which has from time to time been the subject of much conflict of opinion. It may be stated, however, that by London bankers a "confirmed" credit has generally been regarded as one which falls within our definition of an irrevocable credit, that is to say, one which embodies the *issuing bank's absolute undertaking* to accept and pay bills drawn in accordance with specified terms. This view was upheld by the Courts in the case of *Stein v. Hambros Bank of Northern Commerce*, 1921, quoted above, where the credit in question was described as a "confirmed credit". Thus the

general practice in this country has been to regard the two terms "confirmed credit" and "irrevocable credit" as synonymous.

In spite of this, however, there have long been those who have followed the American usage of not describing a credit as "confirmed" unless and until the banker in the exporter's country, i.e., the banker through whom the credit is advised, himself confirms that any bills drawn on the strength of the credit will be negotiated by him and in due course honoured by the issuing bank. In other words, the responsibility of the *negotiating* banker is, as it were, "tacked on" to that of the issuing banker, a matter which may be of some importance to an exporter in a far-away corner of the world, who has no knowledge of the standing of the issuing bank but may be quite ready to accept the assurance of a local bank well known to him.

In illustration of this position we may take the case of an importer, say, Brazil, who wishes to purchase goods from this country, and for this purpose instructs his bank to open a credit in favour of an exporter in London. In due course, the London exporter is advised of the opening of the credit through the London agents of the Brazil bank, but if the exporter is not satisfied with the undertaking of a foreign bank about which he knows nothing, he may request the London agents concerned to "confirm" the credit, i.e., to supplement the contract with their own undertaking to negotiate the exporter's bills. If the London agents are willing to perform this service (for which they will, of course, receive a commission from the Brazil bank), they will cable the issuing banker for permission to add their confirmation. Upon receiving this permission they will give the beneficiary their confirmation of the credit and will then assume responsibility to him for the due payment of the drafts.

The International Chamber of Commerce (see p. 545) has recently given sanction to this latter use of the term "confirmed"; and it is becoming more common to use the unambiguous term "*irrevocable*" to describe a credit which embodies an undertaking on the part of the issuing bank only. To cover any possibility of doubt arising from different usage on the two sides of the Atlantic, the joint description of "confirmed *and* irrevocable" is sometimes applied to an irrevocable credit which has been "confirmed" by the negotiating banker.

Unconfirmed Credits.—An *Unconfirmed* Credit is one which involves no undertaking to the beneficiary, on the part of *either* the issuing or negotiating banker, that the bills drawn under the credit will be duly honoured. Such a credit may in fact be little more than an intimation,

forwarded to the beneficiary by the issuing bank through its agent or correspondent abroad, that the bank is at the time of writing prepared to honour the beneficiary's bills drawn under the credit, provided specified conditions as to form, amount and term are complied with.

In view of what we have stated respecting the ambiguous usage of the term "confirmed", it is not surprising that ambiguity sometimes arises in connection with the term "unconfirmed", which is used in America to describe any credit which has not been confirmed by the *negotiating* bank (even though it may be an irrevocable credit). Consequently, it is becoming the practice to refer to credits as "revocable", when they contain no undertaking on the part of the issuing bank to honour all drafts drawn thereunder, or when the undertaking is restricted by the terms of the credit.

Credits of this nature commonly contain a clause such as "*Kindly note that this credit is an unconfirmed one, and is therefore subject to alteration or cancellation at any time, without notice*". In other cases, however, an unconfirmed credit, communicated by the issuing bank to the negotiating banker, will contain an undertaking that drafts negotiated *prior to receipt of notice of cancellation* will be duly honoured. Any credit containing this clause is, of course, available only at the bank to which it is advised, since the issuing banker could not possibly advise *all* other banks and branches in the event of his finding it necessary to cancel a credit of this description. The inclusion of the clause means that the negotiating banker's position is reasonably secure; if the clause is *not* included, the banker will not be willing to negotiate drafts drawn under the credit unless he is prepared to rely solely upon the standing of the exporter. He will in any case safeguard himself by requiring control, until the bills are duly accepted, of any documents of title or other security which may be available.

Revocable Credits.—A revocable credit is, therefore, one which the issuing bank reserves the right to cancel. The precise extent of the issuing bank's liabilities under such a credit depends very much on the wording of the document, but in *Cape Asbestos Co., Ltd. v. Lloyds Bank, Ltd.*, 1921, it was held that the bank issuing a "revocable" credit was entitled to cancel it at any time, even without notice to the beneficiary. For this reason, bankers who are asked to negotiate bills under such credits endeavour, by calling for the insertion of a proviso similar to that mentioned above, to obtain the assurance of the issuing bank that the latter will honour all bills negotiated by the correspondent banker before receipt by him of notice of cancellation.

The necessity for such a safeguard is accentuated in those cases

where bills drawn by an exporter under a revocable credit are signed by him with the addition of the words "Without recourse", the significance of which is that the drawer is relieved of any liability on the instrument in the event of its dishonour by non-acceptance or non-payment. Since the negotiating bank cannot recover from the beneficiary if a bill drawn by him "without recourse" is not duly paid, bills so drawn are very rarely taken by a bank, and then only after the most careful inquiry.

The exporter may not, of course, draw in this way unless he is authorised to do so by the terms of the credit or by special arrangement with the negotiating banker. But if he is the beneficiary under a revocable credit and does *not* draw "without recourse", he is placed in a much less favourable position. He remains liable as drawer of a bill which he has no guarantee will be ultimately paid, and he obtains no protection in the event of the bill being unpaid. The only benefit accruing to him from the opening of such a credit is that he can discount his bills as soon as the relative goods are shipped, and can do so at a finer rate than would be applied by the banker if the bills were drawn direct on the importer.

The exporter's position is, of course, greatly improved where the credit embodies an undertaking by the issuing bank that drafts negotiated before advice of cancellation will be duly honoured. In such cases his only real risk is that the credit may be cancelled between the date of shipment of the goods and the date when his bill is presented for negotiation. Although in such cases he may usually exercise his right of stoppage *in transitu* and so recover possession of the goods, he can look only to the importer for reimbursement for any expenses or losses he may have incurred.

In view of the disadvantages of revocable credits, it is not always easy to see why they should be utilised in place of the irrevocable type. One explanation is to be found in the fact that the charges on the revocable variety are less than on an irrevocable credit. Hence, two traders who have confidence in each other, and have no reason to doubt the faithful discharge of their mutual obligations, may wish to avoid having to pay the higher charge on an irrevocable credit, but may desire to have the advantage afforded by a banker's acceptance, i.e., the benefit that the negotiating bank will negotiate drafts on a bank at a better price than drafts drawn direct on an unknown foreign importer.

From the banker's standpoint, there is, of course, a distinct advantage in the use of revocable credits, in that if he does not wish

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to bind himself by issuing confirmed credits for a weak customer, he may safely issue a revocable credit because he knows that he can retire at any time from the responsibility he has undertaken.

Negotiation Credits, or "Authorities to Negotiate".—The credits which have been described above all involve the drawing of bills on a bank. But by no means all credits opened by banks are of this type. Sometimes a customer will wish to make arrangements for a supplier overseas to draw bills direct on him, but in order that the exporter shall readily be able to negotiate the bills, the customer requests his bank to open a *Negotiation Credit* in favour of the exporter.

In such circumstances, the bank will request its correspondent in the foreign centre to negotiate bills drawn by a specified person on the customer applying for the facility, up to a given amount and subject to the fulfilment of certain conditions. There is, of course, no implied *undertaking* on the part of the issuing bank to honour the drafts when presented, since the drafts are not drawn on the bank but on the customer—though, in practice, the bills will be domiciled at the bank in question. But the advantage of making the arrangements through a bank is that the *negotiating* bank abroad has, as it were, the issuing bank's reference as to the standing of its customer on whom the bills are drawn.

Nevertheless, such a request to negotiate bills is in no sense an *order* or *instruction* to the negotiating bank, and it is conceivable that the latter institution, having reason to doubt the standing and worth of the accreditée, may either demand security or further instructions from the issuing bank, or may even refuse altogether to negotiate the bills unless the issuing bank gives its undertaking to honour any drafts negotiated under the credit prior to the receipt by the negotiating bank of notice of its cancellation.

Needless to say, the bills drawn under such a credit, being drawn *on a trader*, cannot be negotiated at such fine rates as are quoted for bills drawn under a *bank* credit; but the rate will be better than that applicable to a bill which is not drawn under any type of credit. Moreover, the negotiating banker will be most careful to obtain the liability of the drawer, who will not, therefore, be allowed to sign "without recourse".

Sight and Acceptance Credits.—Strictly speaking, a "Sight" Credit differs from an "Acceptance" Credit merely in the fact that, whereas the former provides that the bill or bills drawn thereunder shall be paid at sight, on demand or on presentation to the grantor, an acceptance credit involves the acceptance by the grantor of a

draft or drafts made payable at a specified future date or specified period after sight.

But the term "Acceptance Credit" has in late years come to mean one which involves the acceptance of bills by a bank or accepting house of known reputation, the grantee being authorised to draw upon it in bills of specified term within prescribed limits as to period and amount. Such credits are usually qualified by the name of the city or town where the accepting bank is domiciled, for the reason that the location of the acceptor has an important bearing on the discount value of the bill. Credits which involve the acceptance of bills by a London bank or accepting house are invariably distinguished as "London Acceptance Credits", and bills drawn thereunder form the bulk of the bank bills on the London Money Market.

The majority of London bankers' acceptance credits are opened with London bankers and accepting houses in favour of exporters, both here and abroad, by institutions which are acting on instructions of *importers*, either here or in other countries, given direct or through the intermediary of other banks. Such credits relate not only to goods shipped to and from this country, but also to goods which never touch our shores, and which are exported by one foreign country to another.

Thus a British importer of foreign merchandise, say, from Brazil, will arrange with a London banker or accepting house to issue a credit in favour of the Brazilian exporter, which enables the latter, as soon as he has shipped the goods, to draw a bill of exchange for the value of the shipment on the accommodating banker or accepting house. The opening of such a credit authorising the Brazilian exporter to draw bills on a house of established reputation permits him immediately to sell his bill on the best terms to a Brazilian banker, and thereby to obtain a speedy turnover of capital without further anxiety as to the due payment of his bill. The British importer has to pay the London banker or accepting house a commission for its services in thus facilitating his purchases abroad, and he must give an undertaking, often backed by security, that he will put the acceptor in funds before the bill matures for payment.

In the same way as London bankers and accepting houses accommodate our own merchants, so they accommodate foreign merchants trading either with this country or with foreign countries. A German importer trading with China may request his banker to arrange a documentary credit with a London banker, because the Chinese exporter has stipulated for payment by bills on London. Again, a South

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American importer may request his own bank in South America to arrange an acceptance credit with a London bank in favour of a British exporter. In such a case the latter will draw his bill and present it with documents attached to the London banker, by whom the draft is accepted and the documents retained for transmission to the foreign importer. The acceptance may be retained by the exporter until maturity, or, more usually, will be discounted by him with his own bank. In both of these cases, the foreign importers arrange through their own banks to have the necessary funds remitted to London in time to meet the bills on their maturity.

Credits of this kind, which are opened by London bankers on the instructions of banks abroad (who are acting on behalf of foreign importers), are known as *London Reimbursement Credits*.

The London banks and accepting houses who grant these acceptance facilities rely, not upon the standing or responsibility of the exporters or importers, but upon the security afforded by current balances, deposits or other items, held by them on account of the banks abroad by whose instructions the credits are opened.

Export Credits.—A Continental method of finance which is gradually coming more into use in this country is that by which the exporter himself opens with his own bank a credit under which the bank agrees to accept the exporter's drafts to an agreed limit. This method is of advantage in cases where the foreign buyer is unable or unwilling to open a credit of any sort, or where it is more satisfactory for the bills to be drawn on the exporter's town than on the town of the importer (see *post*, page 541).

The banker granting the credit does so on his knowledge of the exporter and against the security either of the goods shipped or of some other form of collateral, and he earns a reasonable commission without having to employ any of his cash resources. The exporter, by paying the banker for the use of his name as acceptor of the draft, obtains an instrument which he can turn into ready cash at the lowest market rate of discount.

Clearly, it is of first importance that the banker who has accepted the bill should retain complete control of the relative documents. As a rule, these will be sent abroad to the bank's branch or correspondent with instructions that they are to be handed to the consignee only against payment of the full invoice value of the goods, and this payment must, of course, be received in London (by either T.T. or approved banker's cheque) in time to meet the bills accepted by the London banker when they are presented for payment at maturity.

If the funds are not forthcoming in time, the exporter himself will have to provide them at maturity.

Whether or not this method is used depends on its cost, represented by the bank's commission and the ruling market discount rate, as compared with the cost of other available methods of obtaining payment for the shipment.

The German form of *Akzept-Kredit*, issued against Letters of Hypothecation or margins from the beneficiary, is a common Continental method of granting accommodation to sellers of goods. Instead of taking an overdraft or loan on current account, the customer draws a bill on the banker, who, in return for a commission, accepts the bill and returns it to the customer, the latter being thus enabled to discount the bill in the Market as a bank acceptance.

Exporters' and sellers' credits are not as popular with London bankers as are credits issued at the instance of importers, because they prefer to see the *buyer* make credit arrangements. It is a general principle that banking finance for the sale of goods is sounder when the buyer is sufficiently trustworthy to be able to make and obtain his own credit arrangements. In theory, at any rate, the person with the goods provides the better security for the banker.

Fixed and Revolving or Running Credits.—A *Fixed Credit* is one which is available only for a fixed total amount, either in one draft or in several, during a given period of time; it expires automatically as soon as the amount is exhausted or the period of time has expired. A *Revolving Credit*, on the other hand, is one which is continuing, in the sense that the limit up to which the beneficiary may draw bills is automatically renewed from time to time in a prescribed manner. There are at least five types:—

(1) Where the credit is available, until cancelled, for an unlimited amount in all, but subject to a limit on the amount of bills outstanding *at any one time*. For example, it may be stipulated that no more bills shall be drawn after £1,000, if bills to that amount still remain unmatured and unpaid, until advice is received that a bill or bills have been paid and that the total amount of bills current has therefore been brought down below the limit.

(2) Where the amount drawn for in one draft at any one time is limited to a certain sum. When this draft matures and is paid, a further draft not exceeding the stipulated amount can be issued.

(3) Where a limited amount in all may be drawn during a specified period, at the expiration of which the credit is automatically renewed

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for the same amount and for a similar period, e.g., £10,000 during any one month. Such a credit is re-available during each period for the limited amount only, so that if drafts in any period do not exhaust the limit, the balance cannot be carried forward to the following period. This type is sometimes referred to as an *Extended Credit*, and it differs from the first type in the fact that the drafts *outstanding* at any one time may be considerably in excess of the limit to the drawings for each period.

A common example of the latter type of revolving credit is that known as an *Encashment Credit*, i.e., a credit opened by a bank in favour of a customer who is proposing to spend a holiday in another town, whereby the customer is accredited to encash at a branch or agency of his own bank cheques up to a fixed limit during any one day, week, month, or other defined period.

(4) Where a single bill up to a fixed amount may be drawn at any time, and the credit automatically renews itself for the same amount after each draft is issued. This credit is in effect *unlimited*, and is seldom used.

(5) Where there is no limit to the amount which may be drawn for in any one draft and no limit to the total amount outstanding. This type—a form of *blank* credit (see below)—is comparatively rare.

The commercial advantage of a revolving credit is seen in the case of an agent who is engaged in buying regular “lines” of goods abroad for his principal. In such circumstances, a revolving credit may be opened to enable the agent to buy goods for his employer up to an agreed limit, and to draw bills up to that limit in favour of the suppliers of the goods. As soon as the goods are shipped, or the bills paid, etc., according to the terms of the credit, the agent's limit is automatically renewed, and he may proceed to purchase further goods up to the fixed limit.

Revolving credits are also employed to a considerable extent to facilitate the drawing of finance bills by bankers and others, when the accepting bank is reimbursed for its payment of an earlier bill out of the proceeds of a “renewal”.

Omnibus Credits.—These are in some degree akin to the revolving credits described in the preceding paragraph. Though not common nowadays, these are occasionally granted to shippers of undoubted standing to enable them to finance their purchases by drawing round sums on their bankers against a general charge over the goods handled by them. There is, of course, a limit to the amount of credit granted

to any one shipper, whilst each drawing is generally restricted to a percentage (say, 75 %) of the total invoice value of the goods in process of shipment at any particular time. A credit of this type partakes of the character of the *Akzept Kredit* referred to earlier.

Clean and Blank Credits.—"Clean" Credits are those whereunder a beneficiary is empowered to draw drafts which are not required to be accompanied by security in the shape of documents of title to goods or other instruments of value. In view of the absence of collateral security, banks necessarily exercise the greatest care in opening credits of this type, and it may be taken that, as a general rule, they are issued only in favour of persons of the highest standing, and, even then, only against such security as a cash deposit or a guarantee.

Whilst the facilities are usually limited to drafts for a given amount within a stated period, they may be *unlimited*; i.e., the accreditees may be empowered to draw up to an unlimited amount at any one time and with no limit to the total amount outstanding. Credits of this type are usually described as *blank credits*, and they play a conspicuous part in connection with the drawing of finance bills. London bankers and accepting houses open these credits in favour of foreign bankers and firms of first-class standing to enable them to issue drafts on London when conditions are most favourable (see *ante*, p. 226).

In some foreign countries, and especially in the United States, many clean credits of this type are really *Exporters' Credits*, issued to persons engaged in the shipment of goods abroad, for directly financing the movement of goods. For example, a New Orleans cotton exporter, in order to finance his purchases from the up-country growers, will arrange through his bankers to draw clean bills on a London or New York bank or accepting house months before the cotton crop is baled for export.

The common form of credit already referred to, issued by a bank in favour of a customer proposing to stay in another town, clearly falls within this category, but the term "clean" credit is also applied to those credits opened by a bank in favour of a banking agent or correspondent, or in favour of a shipper of high standing who is permitted to handle the documents relating to his shipments and to send them direct to his customers, the consignees.

Bills "en pension".—This phrase was formerly used to describe a practice of merchants in the North of England in respect of bills accepted by their Continental debtors. At times when interest rates on the Continent were considerably higher than those ruling in this

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country, the discount of Continental bills would have been an expensive procedure, so, to obtain funds as cheaply as possible, a merchant holding such bills would open an acceptance credit with his banker, and would hand over the bills to the banker as security for the latter's liability on his acceptances. The bills thus taken as security were said to be taken "en pension".

A simple example will serve to illustrate the advantages of this procedure. Suppose that a merchant in Manchester holds three months bills on Rome to a sterling value of approximately £10,000 at a time when the rate for three months trade bills in Rome is 6 %, while the rate for bank bills of similar tenor in London is only 3 %.

Now, if the merchant were to sell or discount the bills at the rate ruling in Rome he would receive only £9,850, whereas, by drawing bills to the same amount on a London banker, and discounting them at the London rate, he would realise £9,925, less accepting banker's commission, say, £25, thus effecting a saving of £50 in all.

The practice has fallen into disuse since the War, and the phrase is now used to describe bills purchased by a bank and held in its portfolio by order of and on account of a client or correspondent (see *ante*, p. 278).

Documentary Credits.—All credits which cannot be classed as "clean" or "blank" are described as *documentary*, implying that the issuing banker agrees to accept drafts drawn upon him only if they are accompanied by specified documents of title to goods, or other form of collateral security.

The term "Documentary Credit" is correctly applied to any credit—revocable or irrevocable, confirmed or unconfirmed, fixed or revolving—which calls for delivery of documents by the beneficiary, whether the drawing of a bill is or is not involved. Among the Eastern and Dominion banks, however, it is usual to confine the term "Documentary Credit" to an advice sent by a bank in London to one of its branches overseas, or *vice versa*, authorising a named exporter to draw bills on a named importer. Usually the branch to which the credit is advised will inform the exporter of its willingness to negotiate the bills. This it does on the strength of the authority of the advising branch, so that the arrangement is closely akin to an *Authority to Negotiate* (see page 514) and is better so designated.

Again, some writers apply the term "Documentary Credit" in a specially restricted sense to a credit which does not involve the drawing of a bill, as, for example, to the arrangement, common in the Eastern trade, whereby an importer of goods on this side instructs his

bank to advise its branch or correspondent in the exporter's town to *make advances* to the exporter against delivery of documents covering his shipments. In these circumstances no bill is drawn, but the importer undertakes to pay for the documents when they are handed to him by his bank.

Such a credit is better described as a *Payment against Documents Credit*, though, strictly speaking, the arrangement does not involve a credit at all; it is certainly not a bank credit. The documents, it will be seen, remain under the control of the bank or its correspondent throughout the whole transaction, and the bank has also the liability of the importer (and possibly also of the exporter) to rely upon.

Request to Issue a Credit.—It is plainly to a banker's advantage to take explicit instructions from a customer for the issue of any kind of credit, and with the object both of avoiding dispute and faithfully carrying out the customer's wishes, bankers invariably require the customer's signature to their own carefully drafted form of application. This precaution is specially necessary on the issue of a documentary credit, for, in such a case, the banker requires, not only the usual details applicable to all forms of credits, but also precise particulars of the documents which are to be obtained from the beneficiary.

A specimen of a form actually used on the issue of an Irrevocable Documentary Credit is reproduced on page 523. It will be observed that the customer signs the document over a sixpenny stamp, and that he is required to state whether the credit is to be opened by mail or cable, and to supply the name and address of the accreditée or accredités. The instructions to the bank provide for delivery, with the bills drawn under the credit, of the bill of lading, marine insurance policy, invoice, and such other documents as the customer may prescribe. Moreover, the application contains an undertaking by the customer to keep the goods fully insured, and to accept and pay the drafts drawn under the credit, pledging the documents of title to the goods to the banker as security for the due performance of the contract. If necessary, the customer is also required to sign a separate Letter of Hypothecation, described on page 533.

The application form on page 522 is for an irrevocable or "confirmed" documentary credit, i.e., one involving an undertaking by the bank to accept and pay the bills drawn thereunder, provided they are accompanied by the specified documents. A somewhat similar form is used in the case of an *unconfirmed* or revocable credit. On page 523 is a specimen of the form of credit which may be issued by an English bank in response to the application reproduced on page 522.

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APPLICATION FOR AN IRREVOCABLE DOCUMENTARY CREDIT.

To

THE LOMBARD BANK LIMITED

NORTHTOWN BRANCH.

* Strike out mail or cable.

I/We request you to establish for my/our account by ^{* mail} [cable] an Irrevocable

§ Credit on the following terms:—

§ A confirmed or irrevocable credit cannot be cancelled before the date of its expiry without the consent of the accreditees and others.

With your Agents in *Philadelphia*

In favour of (Name) *James Ambrose & Son*

(Address) *173 East Avenue, Philadelphia*

To the extent of £2000, say *two thousand pounds*, available for drafts at *sixty days'* sight drawn on *The Lombard Bank Limited, London, E.C.2.*, and documents as below covering *130 Bales Cotton* in one or more shipments ‡ for invoice cost

at *fifteen pounds per bale, C.I.F.*, to be ^[despatched] shipped from *New Orleans to Liverpool*

‡ If any price inserted give unit price if possible and state if terms are F.O.B., C.&F., C.I.F., etc.

direct or indirect and with or without transhipment. Against delivery of the following documents:—

(a) Invoice.

(b) Full set of Bills of Lading consigned to Order and blank endorsed. [Unless specifically otherwise instructed you may accept "received for shipment or transportation" Bills of Lading in the form customarily issued at the port or place of loading.]

(c)

.....

(d) ^{Marine} War Risk Policies or Certificates covering *twenty* per cent. above the C.I.F. value.

(a) Insert "certified", if necessary.

(b) If receipts for transportation, etc., are not to be accepted the bracketed Clause must be struck out.

(c) Insert any special documents required.

(d) Insert additional risks or delete if all insurance is being effected here.

‡ Delete this clause if beneficiaries are effecting insurance.

Insert further instructions.

[‡ Marine and War Insurance will be effected by and I/we undertake to keep the said merchandise adequately covered by Policies of Marine, War, Fire and other usual risks in approved Companies and to lodge with you or produce the policies if called upon to do so, and in the event of my/our failure so to do you may so insure the said merchandise at my/our expense.]

This Credit is to remain irrevocably valid until *six months from the date hereof*.

In consideration of the opening of the above credit I/we hereby undertake to accept and to pay in due course all drafts drawn within the terms thereof and/or to put you in funds to meet your acceptances and/or to take up and pay for all documents negotiated thereunder on presentation and in default of our so doing you may sell the goods before or after arrival.

You are to have a lien on all goods, documents and policies and proceeds thereof for any obligations or liabilities present or future incurred by you under or arising out of this credit.

The transmission of instructions under the above credit and the forwarding of documents are entirely at my/our risk. You are not to incur any liability beyond seeing that the drafts and documents purport to comply with the terms and conditions of this credit.

You are authorised to debit my/our account with sums paid under this credit also with commission charges.

Yours faithfully,

Thomas Brown.

6d.

STAMP

Date, *7th June, 19..*

NOTE.—The words within square brackets [] would be deleted in the form in actual use.

On page 524 is a specimen of the form of an Irrevocable Documentary Credit issued by an American house. The reader will observe that it corresponds in its essentials to the irrevocable or "confirmed" type of credit issued by a bank on this side.

Procedure Under an Irrevocable Documentary Credit.—The procedure on the issue and utilisation of the credit, reproduced below, would probably be somewhat as follows. On completion of the application form by Thomas Brown, the Credit Outwards Department

IRREVOCABLE DOCUMENTARY LETTER OF CREDIT.

THE LOMBARD BANK LIMITED.

No. 1793.
£2000.

London, E.C.2,
7th June, 19...

To MESSRS. JAMES AMBROSE & SON,
173 EAST AVENUE,
PHILADELPHIA.

DEAR SIRS,

You are hereby authorised to draw drafts upon this bank at sixty days' sight to the extent in all of £2000, say Two thousand pounds, for invoice cost of 130 bales of cotton to be shipped to Thomas Brown, of 25 Quayside, Liverpool.

This credit expires, unless previously cancelled, six months from date. All drafts against it must be drawn and duly advised to us before that date, accompanied by Invoice, Bills of Lading issued to the order of the shipper and endorsed in blank, and Marine Insurance Policies or Certificates covering twenty per cent. above C.I.F. value.

Particulars of all drafts drawn under this Credit must be indorsed on back thereof, and the bills must specify that they are drawn under Credit No. 1793, dated 7th June, 19...

We hereby engage with the drawers, indorsers, and *bona fide* holders of drafts drawn under and in compliance with the terms of this Credit, that against surrender to this Bank of the above-mentioned documents in order, the said drafts shall be duly accepted payable in London, England, on presentation in order; and that they shall be duly honoured on presentation in order at maturity.

We are,

Yours faithfully,

THE LOMBARD BANK LTD.,

Henry Robinson,

General Manager.

of the Lombard Bank would advise the credit to the accreditees, James Ambrose and Son, not direct, but through the bank's agents in Philadelphia. By so doing the *issuing* bank ensures that the credit gets into the proper hands, and, at the same time, acquaints the accredittee with the name and address of its correspondents, with the possibility that any business ensuing will pass through them. On the other hand, the fact that the credit is not made available *only* at a specified bank in Philadelphia means that the accredittee is free to take his drafts and documents to any bank which he thinks will offer him the best terms.

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It does not follow, however, that *all* credits are opened in this manner. Very commonly the issuing bank advises the credit direct to its correspondent in the importer's town, and makes the credit available only with that correspondent, which means that the importer cannot negotiate his bills on the strength of the credit except with the

IRREVOCABLE DOCUMENTARY CREDIT.

GENERAL TRUST COMPANY OF NEW YORK

Foreign Department,
New York, 1st July, 19...

Letter of Credit No. 17326

MESSRS. THOMAS ROBINSON & Co.,
WHITWAY HOUSE,
LONDON, ENGLAND.

GENTLEMEN,

We hereby establish our irrevocable credit in your favour for account of *Messrs. Henry White & Co., Inc., New York*, available by your drafts drawn at *Ninety (90) days' sight* on the General Trust Company of New York, 32 Lombard Street, London, E.C., for any sums not exceeding a total of *Twenty Thousand Pounds (£20,000) Sterling*, accompanied by commercial invoice, consular invoice, ocean bills of lading and marine insurance certificates evidencing cost, insurance and freight shipment of *Two Hundred (200) tons of Rubber from the Far East to New York during August and/or September, 19...*
Insurance as above

Ocean Bills of Lading must be drawn to the order of General Trust Company of New York.....

A COPY OF THE CONSULAR INVOICE AND ONE BILL OF LADING MUST BE SENT BY THE BANK OR BANKER NEGOTIATING DRAFTS, DIRECT TO THE GENERAL TRUST COMPANY OF NEW YORK, *New York*.

The amount of each draft negotiated, with the date of negotiation, must be endorsed hereon.

All drafts drawn under this Credit should bear the clause " Drawn under G. T. Co. of N.Y. Letter of Credit No. 17326 dated New York, 1st July, 19.. "

We hereby agree with *bona fide* holders that all drafts drawn by virtue of this Credit, and in accordance with the above stipulated terms shall meet with due honour upon presentation and delivery of documents as specified to the General Trust Company of New York, *London*, if drawn and negotiated on or before *31st October, 19...*

Yours respectfully,

FOR THE GENERAL TRUST COMPANY OF NEW YORK,

James Brown,
Manager.

correspondent bank. The latter, of course, advises the exporter of the opening of the credit. A credit of this type is known as a *Straight Credit*.

The credit may be opened by cable or by mail, according to the customer's instructions. In the former case, the bank utilises its special code, which is applicable to all types of credits and enables a

fully comprehensible message to be transmitted with the minimum of words. A written confirmation is forwarded by the first mail thereafter, and this will embody the essentials of the form of mailed credit reproduced on page 523.

In due course, Ambrose and Son will get together the documents relating to the first shipment of cotton from New Orleans, and, having verified that they are in order, will present them, with their draft at 60 days' sight on the Lombard Bank for the invoice value, either to their own bankers, or to the local bank through whom the credit was advised. The *negotiating* bank will satisfy itself that the draft and documents are in order, and that they conform to the terms of the credit, after which they will hand Ambrose and Son their own cheque for the present value of the draft, or credit them in account.

The draft and documents are then forwarded either direct to the Lombard Bank, or to the Philadelphia bank's London house, which will present the bill with the documents attached to the Lombard Bank for acceptance.

After giving its acceptance, the Lombard Bank will retain the documents, but its manner of dealing with the bill will depend on whether it was presented direct or through the London agent of the Philadelphia bank. In the latter case, the acceptance will be handed to the agent, who will either hold it in portfolio until maturity, when the proceeds will be collected for account of the Philadelphia bank, or discount it immediately on the London Market as a fine bank bill, crediting the proceeds, as before, to its correspondent abroad. In the former case, where the bill is presented direct, it may be returned after acceptance to the Philadelphia bank, or it may be retained in portfolio on its account by the Lombard Bank, which will, in due course, credit its correspondent with the amount of the bill at maturity.

Due advice of the acceptance of the bill and receipt of the documents is given by the Lombard Bank to the accommodated customer, Thomas Brown. If Brown is of sound reputation financially, or has deposited security, he may be allowed to have the documents immediately, so that he can claim the goods without delay. In other circumstances, he may be allowed to have them only against his signature to a *Trust Receipt*, *Trust Letter* or *Trust Engagement* (see *post*, page 535). But in any event he will be required to put the Lombard Bank in funds to meet its acceptance at least three clear days before its maturity, unless, of course, there are standing arrangements whereby the amount of the bill can be debited direct to his account.

DOCUMENTS APPERTAINING TO BILLS.

The majority of documentary credits issued to finance the shipment of goods involve the drawing of bills of exchange, and, to provide collateral security for due payment of the bills, call for delivery of what is known as "a full set of shipping documents". The documents may consist of some or all of the following: (a) a complete (usually triplicate) set of the *Bills of Lading* testifying to the shipment of the goods, made out to order, endorsed in blank, and marked "freight paid" unless a freight receipt is attached thereto; (b) a *Marine Insurance Policy* covering all risks, marine and otherwise, from the point of delivery of the goods to the point of discharge; (c) duplicate *Invoices* giving full details of the quantity, marks and value of the goods, and certified, if necessary; (d) a *Certificate of Origin* or *Consular Certificate*, certifying the country from which the goods are first exported; (e) in the case of certain classes of merchandise or of goods from a certain port, a *Consular Certificate of Health*; (f) in certain cases a *Weight Certificate*; and (g) a *Letter of Hypothecation*.

The essential features of these documents are briefly described in the following paragraphs, but at this point it may be stated that the documents tendered to the banker negotiating bills under a credit must be precisely those which are required by the terms of the credit, and any others are taken at the banker's own risk. If the credit requires a *full set* of bills of lading, the negotiating banker must not accept two parts and be content with the beneficiary's undertaking to provide the third copy at a later date. Similarly, if an insurance *policy* is stipulated, it is not sufficient to accept either a certificate of insurance or a broker's cover note, unless a letter of indemnity is obtained freeing the negotiating bank from responsibility.

The Bill of Lading.—The most important of the documents attached as security to commercial bills of exchange is the Bill of Lading, since it acts as a document of title to the goods mentioned therein, as a contract for their carriage and as a receipt for their shipment. A bill of lading is defined as a document, signed by the master of a ship, acknowledging the receipt on board the ship of certain specified goods for carriage, and embodying an undertaking on behalf of the shipowners to deliver the goods to a named party, "or to his order and assigns", or merely "to order", upon payment of the freight stipulated for. A document that does not acknowledge the receipt of goods on board a *named* vessel, or that is not signed by or on behalf of the master of the ship, is not strictly a bill of lading.

A bill of lading which acknowledges receipt of the goods concerned "in good order and condition" is described as *clean*, as distinct from a so-called *foul*, *dirty* or *claused* bill of lading, which records some damage to part or all of the goods, e.g., "one bale torn", "shipped in damp condition", "two casks burst".

A bill of lading is not a negotiable instrument in the full sense of the term (though the title of a *bona fide* transferee for value of the document will defeat an unpaid seller's right of *stoppage in transitu*), and, if it declares that the goods concerned are deliverable to a given person, *without* the addition of the words "or order", the effect is that the goods can be claimed by that person only, and it is not essential that he should even have the document itself in order to obtain possession: he can claim the goods merely by presenting the shipping company's Arrival Notice and paying freight due. In such circumstances, the bill of lading is described as "straight", and is not a transferable document of title. It functions merely as a receipt for shipment and a contract of affreightment with the shipper.

But if the bill of lading is drawn, as is usual, to a named person "or his order", its effect is that the full property in the goods concerned may be transferred by mere delivery of the bill after indorsement by that person, or by an indorsee, provided that no indorser can give a better title than he himself possesses. The position is similar when the bill of lading is drawn "to order" merely, and no name is specified, in which case the document is deemed to be drawn to the order of the shipper, and the title thereto passes on his indorsement, followed by delivery. But in either of these cases, the transfer is "subject to equities"; that is, the transferee, even if he takes the instrument for value and in good faith, will not obtain a good title if the instrument is in any way affected by fraud. As a general rule, no transferee can acquire, or pass, a better title to a bill of lading than that of his immediate transferor, with the exception referred to above in regard to *stoppage in transitu*.

For safety and convenience, ocean bills of lading, like documentary bills, are drawn in sets of three or four parts, excluding any *Master's Copies* (see below) or unsigned copies, whereas coastwise or short-distance bills are usually "sola". As a rule, different parts are sent to the consignee or his agent (frequently a banker) by different mails, with the object of reducing to a minimum the risk of loss or delay in transit.

Stamping Bills of Lading.—Each effective part of a bill of lading

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covering goods exported from this country or carried coastwise requires a 6d. *impressed* stamp.

An unstamped and unsigned *copy* of the bill of lading (which is of no value as a document of title) is retained by the consignor as evidence of shipment and for use in the event of a claim having to be made on the insurers under the marine insurance policy covering the goods. A second copy (called the "Master's Copy" and usually with these words stamped upon it) will be kept by the master of the ship to assist him in the identification of the goods.

It is a common practice for shipping companies to issue to the shippers other non-effective copies of the bill of lading, for retention as explained above, and these copies are very frequently stamped "Master's Copy" to differentiate them from the effective parts of the set.

"Received for Shipment" Bills of Lading.—The standard form of bill of lading invariably describes the goods concerned as "Shipped on board the S.S. _____", the blank being filled in with the name of the ship on which the goods are loaded. Such bills are known as "Shipped" or "On board" bills of lading to distinguish them from what are known as "Received for Shipment" or "alongside" bills of lading, a description applied to those in which the shipping company states that the goods concerned are "Received for shipment on board the S.S. _____".

The latter practice has arisen because of the fact that, at certain times, or in the case of through transit, it is exceedingly difficult for a shipping company to undertake definitely to carry goods on a particular ship. A "received for shipment" bill does not, therefore, afford evidence that the goods concerned have been received on board a given ship or, indeed, on *any* ship, and there is, consequently, no guarantee that actual shipment will not be delayed indefinitely.

Such a document is not strictly a bill of lading at all, since it does not acknowledge the receipt of goods on board a *named* vessel. It is not a good tender under a C.I.F. contract * (*Diamond Alkali Export*

* **C.I.F. Contracts.**—A c.i.f. (cost, insurance and freight) contract is one relating to the sale of goods in which the seller undertakes to pay freight and insurance on the goods. Such a contract involves five duties on the part of the seller, viz.:—

- (a) To ship the goods, of the description specified, within the time specified in the contract.
- (b) To arrange and pay for the carriage of the goods to the specified destination.
- (c) To insure the goods.

Corp. v. Bourgeois, 1921), and it should not be accepted where the terms of a credit call for delivery of bills of lading, unless they state that a Received for Shipment Bill of Lading shall be sufficient (see Note on Specimen Form, p. 522).

Dock Receipt, Wharfinger's Receipt and Mate's Receipt.—As soon as the shipper has his goods ready prepared for shipment, he arranges the terms of the contract of carriage either with the agent of the ship-owners or with the master, and he agrees to deliver the agreed quantity of goods alongside the ship at a prescribed time. In due course, the goods will be delivered either on the quay or in lighters.

Goods delivered to the loading quay are acknowledged by a *Dock Receipt* or *Wharfinger's Receipt*, from which the bills of lading are prepared after the goods are put on board. Goods loaded direct on to the ship from lighters are acknowledged by a "*Mate's Receipt*". In either case, the receipt for the goods is presented by the shipper to the shipping company together with the bill of lading (and copies) which he has filled in. The shipping company signs the bills of lading on behalf of the master of the ship and retains the receipt for the goods. In special cases, the bills of lading may be signed on behalf of the master without production of the mate's receipt if the company is satisfied that the person applying for the bills of lading is entitled thereto, and that the goods concerned are duly shipped.

Unless the bill of lading is stated to be "Freight Forward", which is not common, the shipping company will not usually add the master's signature to the document until the freight has been paid. When the freight is paid, the bill of lading will be stamped "Freight Paid", and it should be observed that under the usual terms of a bank credit, a bill of lading would not be good delivery without this stamp.

"Through" Bills of Lading.—Sometimes the bill of lading tendered to a banker is what is known as a "Through Bill of Lading", in which case it may be either of two types of document: (a) a document issued by someone other than the shipping company, and purporting to

(d) To make out an invoice of the goods.

(e) In the absence of any stipulation to the contrary, to deliver to the buyer the bill of lading, the invoice and the insurance policy.

The last condition is of particular importance, for a c.i.f. contract is as much a contract for the sale of documents of title as for the sale of goods.

It is necessary for a banker, in dealing with bills drawn under documentary credits, to see that the documents attached are such as form a valid tender under the terms of the contract concerned, and, since the majority of such bills relate to c.i.f. contracts, the banker must be well versed in the intricacies of the law relating thereto.

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cover the movement of the goods overland as well as overseas from the place of origin to the port of destination; or (b) a bill of lading relating to goods transhipped during their sea-voyage, which covers the goods from the port of shipment to the port of transshipment, and thence to the port of destination.

The former type of document is commonly issued by American railway companies in respect of shipments of cotton to this country (being known as a "Transshipment Bill of Lading") and it serves both as a railway receipt and as a form of bill of lading. It is not, however, really a bill of lading at all, since it does not acknowledge the receipt of goods on a *named* vessel. It is not a valid tender under a c.i.f. contract; and it should not be accepted by a banker in connection with a credit which calls for delivery of a bill of lading unless it is specifically authorised (see Note on Specimen Form, p. 522).

On the other hand, where goods are transhipped in the course of their sea-voyage, the *only* good tender under a c.i.f. contract is a "through" bill of lading covering the goods throughout the whole of their voyage. Thus in the case of *Landauer and Co. v. Craven and Speeding Bros.*, 1921, a consignment of goods sold on c.i.f. terms had been shipped from Manila to Hong Kong and there transhipped to London. A bill of lading was issued covering the goods from Manila to Hong Kong where it was surrendered for a fresh bill of lading covering the voyage from Hong Kong to London. It was held that the buyer could refuse delivery of the goods as he had not been tendered a bill of lading covering the whole voyage from Manila to London.

The Marine Insurance Policy.—It is the function of the marine insurance policy to cover the third of the great risks of international trade mentioned early in Chapter XXI, viz., that the goods concerned may be damaged, lost or destroyed during the process of transfer from seller to buyer.

The policy is assignable, and should be made out in favour of the bank, or, if it is drawn to the order of the shippers, it should be indorsed in blank and the title thereby vested in the holder by delivery. The policy indemnifies the holder to the extent of his insurable interest in the goods (i.e., their cost, plus freight, other charges and profit), in respect of all ordinary risks, but it is important to ensure that any special risks attaching to a particular class of commodity are also covered, e.g., breakage, leakage or sea-water damage.

The policy must be properly stamped, otherwise it will be unenforceable. Moreover, in this country a policy cannot be stamped

after execution (save under penalty of a fine of £100), unless it was made abroad. In the latter case it must be stamped within 10 days after its receipt in the United Kingdom.

Since payment in respect of loss or damage is made by the insurers to any person in *bona fide* possession of the policy, it is clearly of first importance that the document should accompany the other documents of title to the goods which it covers. Only by taking this precaution can a banker who takes a documentary bill ensure that his security is not rendered quite worthless by an unforeseen accident on the high seas.

Moreover, if the credit calls for a *policy*, as is usual, a bill drawn thereunder would not be in order unless accompanied by the actual policy. Occasionally, the broker who undertakes the insurance of goods issues in favour of the shipper a document known as a "cover note", pending the preparation and issue of the policy. This document is not, however, valid evidence of the insurance, and must on no account be taken in lieu of the policy, except, perhaps, as a purely temporary precaution.

It sometimes happens, too, that the banker to whom a bill drawn under a credit is presented for acceptance is offered a brokers' cover note accompanied by a bankers' indemnity. If the banker giving the indemnity is sound, such a tender will usually be accepted.

Frequently, shippers of goods do not take out a separate policy in respect of each shipment but arrange a *general policy*, usually referred to as a "floating", "declaration" or "open" policy, for a large amount, under which they declare shipments from time to time. In respect of each shipment the shipper issues a *Certificate of Insurance* which certifies that the goods named therein have been declared under and are covered to a stated value by an insurance policy effected with stated underwriters or through a specified firm of brokers. The certificate gives full details of the shipment, goods, marks, ship and voyage; it certifies that it represents the value declared on the original policy and conveys to the holder all rights under the policy to the specified extent. The certificate may be signed by the shipper only or it may be signed by the shipper and countersigned by the broker who arranged the floating policy.

A certificate of insurance is often tendered in place of the actual marine insurance policy as part of the documents required by a documentary credit, but it is subject to certain disadvantages. It is not a good tender under a c.i.f. contract (*Diamond Alkali Export Corporation v. Bourgeois*, 1921, followed in *Scott & Co., Ltd. v. Barclays Bank*, 1923) and should not, therefore, be accepted in lieu of a policy unless

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the terms of credit so provide, although a certificate *may* be taken instead of the policy if it is properly stamped (where necessary), and if it is accompanied by a satisfactory letter of indemnity.

Dock Warrants, Warehouse Warrants and Delivery Orders.—When the goods included in a shipment reach their destination, and are not immediately claimed, they will be delivered by the shipowners into the custody of a dock company, wharfinger or warehouse keeper at the port of discharge, and the recipients will issue, in favour of the persons surrendering the bill of lading, a *Dock Warrant*, or *Warehouse Warrant*, as the case may be, stating that the goods named therein are deliverable to the person named in the warrant, or to his assignees by indorsement.

These warrants are transferable by indorsement and delivery, or by delivery *only* if they are indorsed in blank. Frequently, a *Delivery Order* is printed on the back of the warrant, and merely requires the signature of the person depositing the goods to permit the goods to be delivered either to a named person or to bearer.

Warehousekeeper's Receipts and Certificates.—These are “not transferable” documents issued by warehousekeepers in the form of receipts or acknowledgments for specified goods, and stating that the goods were deposited on a particular date by a named person, and that they are held at his disposal. These instruments are not documents of title, and the owner of the goods may obtain possession, without surrender of the certificate or receipt, merely by forwarding a signed delivery order to the warehousekeeper.

Warehousekeeper's Receipts and Certificates are not negotiable instruments, and they do not operate as a transfer of possession of the relative goods. Hence, a banker who takes such a document as security should always require the depositor of the goods to give him a delivery order, addressed to the warehousekeeper, requesting the latter to deliver the goods in question to the banker, or to hold them at his disposal.

Other Documents Relating to the Shipment of Goods.—It is specially important that the documents taken as security for the due payment of a bill shall include an *invoice* as *prima-facie* evidence of the contract of sale and purchase, specifying the name of the shipper and consignee, the name of the ship and its destination, and the description, quantity, weight, marks, price and value of the goods concerned, with details of any incidental charges or allowances, such as freight, insurance premium and trade discount. Occasionally, the weight of the goods is verified by the inclusion of a *Weight Certificate* (or *Weight Note*), which is issued by a dock company

or by the port authority at the place of shipment, and certifies the weight, both gross and net, of the goods or packages enumerated.

Some foreign countries (notably the United States and the South American countries) require goods imported to be accompanied by a *Consular Invoice*, i.e., an invoice bearing the *visa*, i.e., stamp and signature, of the consul of the country to which the goods are being shipped, with the object of authenticating the particulars and facilitating the assessment of customs duties at the port of discharge.

Other countries, again (especially where goods are to enter under a preferential tariff) require the invoice to be accompanied by a *Certificate of Origin*, specifying the place of manufacture or growth of the goods, and certifying the truth of the invoice; while a *Certificate of Inspection* is occasionally required in the case of perishable commodities, as evidence of their condition at the time of shipment. The latter document is, of course, required by the importer for his own satisfaction. So also a *Certificate of Origin* may in some cases be demanded by him as evidence of the exact place of origin of the goods, where that is an important consideration, as in the case of mocha coffee, which gets its peculiar and aromatic flavour from the soil of origin.

Frequently, the *Certificate of Origin* is indorsed on the back of the relative invoice, in which case the whole document is known as a *Certified Invoice*.

Apart from the more important documents described above, it sometimes happens that other declaratory forms are necessary before the goods can enter the foreign country without difficulty or delay, either of which may, of course, seriously affect the saleable value of the security and thus jeopardise the banker's position. It is, however, impossible to lay down any hard-and-fast rules as to precisely what documents are required in any particular case, and it is, therefore, of first importance that a banker handling documents in connection with bills of exchange should not only obtain complete and explicit instructions from his customer regarding the documents he is to accept, but also make himself acquainted with the requirements of the country and particular trade concerned.

Letters of Hypothecation.—The business of dealing with documentary bills is one which is hedged with such complexity and difficulty, that a banker who has taken every possible precaution to avoid risk of loss can rarely be certain that he is absolutely secure. For this reason it is usual for bankers who undertake to accept, dis-

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count or negotiate documentary bills, or who open documentary credits at their customers' request, or who grant a customer advances against bills for collection, to safeguard themselves by requiring the customer's signature to what is known as a *Letter of Hypothecation*.

This is a document, signed by the customer, conveying to a banker the full ownership of goods, at port of destination or otherwise, in respect of which he has made advances either by loan or by acceptance or negotiation of bills of exchange. The document gives the banker authority to insure and store the goods in his own name, to pay any charges thereon (including freight) to the debit of the customer, and in case of the latter's default, to sell all or any part of the goods to satisfy his claims thereagainst, subject to his right to proceed if necessary against the customer for any balance outstanding.

Where a banker has numerous dealings with a customer, he usually takes a *General Letter of Hypothecation*, covering *all* future transactions.

It is clear that, even though the negotiating banker obtains a letter of hypothecation, his rights to the documents may be restricted by the terms of the bill. For instance, if the bill is expressed as D/A, the banker will have to give up the documents when the bill is accepted, though, upon doing so, he will have as his security the acceptor's undertaking in place of the goods. Where, however, the bill is D/P, the banker retains the goods until payment, so that his letter of hypothecation remains valid throughout the currency of the bill.

The drawee, on the other hand, will not get the documents under a D/P bill until he has paid it. But almost invariably bills drawn under credits are D/A, in which case the drawee bank obtains the documents on acceptance. The bank may in these circumstances refuse to release the documents of title to the consignee until he actually hands over the amount of the bill, or it may allow him to handle them, and so the goods, with varying degrees of freedom, as prudence may dictate.

Occasionally, the bank hands the bill of lading to an independent warehousekeeper, by whom the goods are stored and insured in the bank's name, and are thus available for inspection by the importer's customers and for the taking of samples, but cannot otherwise be dealt with without the receipt held by the bank.

In certain parts of the world banks heavily interested in the movement of goods maintain their own warehouses. Banks in the United States have large cotton and grain repositories under their control, while Eastern banks, as is well known, have their own warehouses,

colloquially referred to as "go-downs", for safeguarding goods held by them as security.

Where bills are accepted under a London Reimbursement Credit (see p. 516), the accepting banker invariably forwards the documents as soon as he receives them to the banker on whose instructions the credit was opened. In this case the accepting banker looks for his security to his foreign correspondent and has no direct dealings with the importer.

Trust Receipts.—An instance has been quoted above where the accepting banker under a credit allows his customer (the importer) to have possession of the documents before the customer has discharged his indebtedness. Other cases where a banker releases documents which he is entitled to retain occur when the banker holds D/P bills and the acceptor (an importer) wishes to get control of the goods in order to realise them and pay off the bills out of the proceeds.

In either of these cases, it is a common procedure to release the documents, especially when the goods are unsaleable without possession or where there are inadequate warehousing facilities available. The release is usually granted under a *Trust Receipt*, *Trust Letter* or *Trust Engagement*, which is a document signed by the person to whom the goods are released, admitting the bank's sole property in the goods, and undertaking to hold the goods and the full proceeds of the sale thereof in trust for the bank until due payment of the bill is made.

The release of goods against a Trust Receipt is, of course, an advantage to all parties concerned in those cases where the importer has a market immediately available, for then the goods can be at once sold and the bill paid out of the proceeds.

Where the goods covered by a D/P bill are released to the acceptor before payment, there is the great disadvantage that the release of goods, whether or not it is safeguarded by the deposit of additional security or a guarantee, lessens the importer's incentive to take up the bill under rebate before it falls due, and thus release the banker's funds which are tied up in the bill. Furthermore, a banker who has once released goods held by him as security has no means of ensuring that they will be sold, or that they will be sold at the best price. There is always the risk that the security may depreciate, or that the importer may sell the most saleable portion of the consignment and have the remainder left more or less unsaleable on his hands. Again, if the drawee sells the goods but omits to transfer the proceeds to the banker, the latter's security is gone unless he can trace and identify the goods in the hands of a buyer who has not paid for

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them, and rely on the principle of subrogation. Finally, there is the difficulty that the drawer of a bill, and especially an English drawer, will rarely, if ever, agree to the release of goods against a trust receipt, so that the negotiating banker who accommodates an importer in this way probably does so entirely on his own responsibility, and thus must be held to have released the drawer from liability for the due payment of the bill.

In the light of these considerations, a reputable banker nowadays consents to release goods held against a D/P bill only if they are stored

TRUST RECEIPT.

London,
5th May, 193...

To NORTHERN BANK LIMITED.

DEAR SIRS,

I/We hereby acknowledge the receipt of the undermentioned Documents under lien to you and undertake to and declare that I/we act as your Trustee(s) for the landing, storage and sale of the relative merchandise. I/We also undertake that the said merchandise will be stored in approved warehouses separate from any other goods whether belonging to myself/ourselves or other persons.

I/We also undertake that the proceeds of the sale of the said merchandise or any portion thereof will be received by me/us as your Trustee(s) and kept separate from other monies and will be remitted to you as and when received by me/us.

I/We also undertake to keep the said merchandise fully insured, the relative Policy or Policies of Insurance being held and the proceeds thereof or of any other insurance of the said merchandise being received by me/us as your Trustee(s) and remitted to you as and when received.

I/We further undertake to return to you on demand the balance of the said merchandise in respect of which you may not have received proceeds.

Yours faithfully,
JAMES BROWN & SONS.

DOCUMENTS REFERRED TO.

(The relative documents are specified here.)

in a neutral warehouse in the bank's name and subject to his holding the receipt, in which case no delivery can be made without his knowledge and consent. This procedure is commonly adopted in connection with imports of cotton and wool received in this country.

Similar precautions are observed by a banker who releases documents to a customer on whose behalf he has accepted bills under a credit; but in this case the banker has no one to answer to but himself and he can, therefore, exercise his discretion as to the facilities which can be granted to the customer.

It will be seen from the specimen here reproduced that, in its essential features, a trust receipt comprises:—

- (1) An acknowledgment by the customer of the receipt of the documents.

(2) An undertaking by the customer

- (a) to hold the goods and, if sold, their proceeds, in trust for the bank, to keep the proceeds separate from other monies, and to deliver them to the bank to be used in settlement of the indebtedness;
- (b) to keep the goods adequately stored, at his own expense;
- (c) to keep them separate from other goods so that they cannot be merged with other stock, thus prejudicing the bank's security;
- (d) to insure the goods against all risks, to hold the policy in trust for the bank and to remit the proceeds of any insurance to the bank.

(3) An agreement by the customer that the bank shall be entitled at any time to resume possession of the goods and rescind the receipt.

In the East it is customary to allow drawees to take *part deliveries*, *ex* warehouses or "go-downs" wherein the bank has stored the goods. Needless to say, this custom throws much additional work on the bank, and precautions have to be taken to see that the drawee does not merely take delivery of such goods as have increased in value, and so leave the bank with a margin of unmarketable security for the balance of bills outstanding.

Partial deliveries are rarely made in London, but wherever they are made, they should always be strictly controlled, and should be noted on all the bills affected, and not merely against the first bill to mature, while payment for such deliveries should be obtained at the current market price or at the invoice value, whichever is the greater. In this way a control of the balance of goods remaining is obtained, whereas, if the bank neglects such precautions, it may find itself left with, say, 50 % of the amount of a customer's bill outstanding, but with only 10 % of marketable goods held against them.

THE NEGOTIATION OF BILLS UNDER CREDITS.

The Position of the Negotiating Banker.—From the considerations discussed in the foregoing paragraphs it will be clear that extreme care must be exercised by a banker who negotiates bills of exchange drawn under a Letter of Credit. He must take every precaution to avoid incurring any liability himself and at the same time do his best to carry out the instructions of the issuing banker. Any failure on his part to ensure that the terms of the credit are fulfilled may result in the

non-acceptance of the bills, for the issuing banker, though he may have *undertaken* to accept and in due course to pay the bills, will be released from this undertaking by any irregularity in the instruments.

The negotiating banker's first care when the credit comes into his hands is to ascertain its precise terms and the extent of the undertaking given by the advising bank: whether the credit is confirmed or otherwise, whether it is revocable or irrevocable, and whether it is properly authenticated by a known signature or by code, verified by reference to his procuration and cipher files. This completed, the banker enters particulars in his Register of Credits Inwards, and, if it devolves upon him to advise the beneficiary, he will take immediate steps to do so, and, if necessary, add his own confirmation.

When drafts are presented, the duty devolving on the banker will depend largely on whether the credit is clean or documentary. In the case of a clean credit, the banker will be handed a draft without documents, and he will proceed to satisfy himself concerning the identity of the beneficiary and the genuineness of his signature, the availability of the credit and the fact that the draft bears proper reference thereto. If everything is in order, the bill will be discounted and the proceeds will be either paid over to the beneficiary or credited to his account.

Far more responsibility is placed on the negotiating banker in the case of a documentary credit. Occasionally, such a credit merely states that payment shall be made against "shipping documents", without further specification, in which case the banker would be advised to demand a full set of ocean bills of lading, a marine insurance policy or a certificate of insurance, and duplicate invoices. All such documents, if accepted, must be in transferable and negotiable form, but, obviously, the absence of precise instructions puts a considerable weight of responsibility on the banker, since it devolves on him to decide whether or not a given document is in order.

More usually, the credit gives details of the documents required, and, in such circumstances, it is the banker's duty not only to see to the details mentioned above, but also to ensure that the documents presented with the draft are precisely those called for by the credit. The invoice must be examined to see that its total corresponds with that of the bill, that it details the quantity and class of goods described in the credit, and that it is, if necessary, certified, or accompanied by a certificate of origin or a consular invoice. If an insurance policy is required, the banker will ensure that it applies to the goods, that it is properly stamped, and that it is made out in favour of the bank or in-

dorsed in blank by the beneficiary. And he will not, of course, accept an insurance certificate, or a broker's cover note, or other evidence of the insurance in lieu of the policy unless he is authorised to do so.

He must, unless otherwise authorised, refuse to negotiate bills drawn against part only of the shipment covered by the credit. For instance, if the credit is for £2,500, covering 250 bales of cotton, he must not negotiate a bill for £1,000 covering 100 bales, unless the credit contains words such as "*in one or more shipments*" (see form on p. 522). In other words, *partial shipments* must be specifically authorised or they will not be valid.

Particular care must be taken in dealing with the bills of lading. The banker must ensure that he obtains a complete set of signed copies, fully conforming with the terms of the credit. As a rule, the credit will prescribe that the bills must be clean, made out "to order" of the consignor and indorsed in blank by him, and that they shall be marked "freight paid", or, if not so marked, accompanied by a *freight receipt* or indorsed with a "*freight release*" by the ship-broker.

If all signed copies of the bill of lading are not produced, the banker will require a satisfactory explanation of the missing part or parts, and he will usually require an indemnity against any loss he may suffer as a result of the absence of any such part or parts. In some cases he will be covered by a *General Letter of Indemnity* in the form illustrated on page 135. In the absence of a satisfactory indemnity he should not accept "foul" or "dirty" bills without explicit authority to do so, otherwise he may find that the issuing banker will refuse to accept the bill on the grounds that the documents are irregular. Bills of lading made out to order of the *consignee* should not be accepted in the absence of special instruction, since, in such a case, the title to the goods can be transferred to the accrediting banker only if he obtains the consignee's indorsement.

The question of freight is also of importance. Banks insist on "freight paid" bills of lading, or on a freight receipt or freight release, because, if the freight has not been paid by the time the goods arrive at their destination, the bank will be unable to claim the goods until it has paid not only the freight, but also any port, landing and warehousing charges incurred at the port of discharge. Warehousing charges, especially, may prove to be heavy, since an unpaid shipowner will warehouse the goods concerned immediately they are disembarked, in which case they cannot be claimed by the banker unless the freight and other charges are paid.

Other precautions to be taken are: (a) the bill of lading must be

a valid receipt for goods *on board* a named vessel—"Received for shipment" bills of lading and so-called "through" bills of lading issued by railway companies, etc., should not be accepted; (b) if the goods are to be transhipped in the course of their voyage, a "through" bill of lading is essential; (c) the goods specified in the bill of lading must correspond with those mentioned in the credit and in the other documents; (d) the bill of lading must deal solely with the goods against which the bill of exchange is drawn; (e) there must be no clause in the bill of lading permitting deviation from the route prescribed, nor any clause giving the shipowner a right of lien for freight owing on other goods.

Having satisfied himself respecting the completeness and validity of the documents, the banker will proceed to discount (i.e., negotiate) the draft, retaining the documents for despatch one set at a time, by the next two mails, either to his correspondent or to the importer abroad, as the credit may direct. The bill itself he will send forward for acceptance and later payment, utilising the services of his correspondent for this purpose.

It may be observed, in conclusion, that the negotiating banker is under no liability to the beneficiary (unless he has added his confirmation to the credit), nor is he in any way *liable* to the issuing bank; but for his own protection he will need to ensure the regularity of any bill he negotiates, since failure to do so will mean that he will be unable to obtain payment from the issuing bank. In one important respect, the negotiating banker may be regarded as an agent for the issuing bank and, as such, liable for failure to exercise due diligence: this occurs where the negotiating banker is instructed to mark on the credit the amount of each bill negotiated. If he fails to do so, and the beneficiary takes fraudulent advantage of the fact, the negotiating banker will be liable to the issuing banker for any loss which occurs (see p. 504).

The Position of the Drawee Banker.—Where the credit is created by the drawee banker at the request of one of his customers, he is bound to fulfil the terms of his undertaking, and, if he fails to do so, will be liable both to his customer and to any other person who has relied on the credit and has suffered from the bank's default. But he is entitled, and indeed bound, to ensure that the terms of the credit are fulfilled by the beneficiary, and must therefore take the same precautions as the negotiating banker. Furthermore, if the beneficiary does *not* fulfil these terms *exactly*, the issuing banker should refuse to honour his drafts, for, if the banker does honour them, he will lose his right

to be reimbursed by his customer. In practice, however, the issuing banker commonly takes an indemnity to cover small irregularities and the difficulty is cleared up by agreement between the parties.

In the same way, where the credit is opened at the request of another banker (e.g., a London Reimbursement Credit), the drawee banker must insist on strict compliance with the terms of the credit, or else he will lose his rights of reimbursement by the foreign banker at whose request the credit was opened.

The Position of the Beneficiary: Financing Outward Shipments.—

The benefit of a credit to the beneficiary necessarily depends very largely on the type of credit concerned, and this is particularly the case where a credit is opened in favour of an exporter to finance the shipment of goods. Clearly, the exporter is most favoured by that method of finance which enables him to obtain speedy payment, with the minimum of risk, trouble and expense.

Of the various types of credit, the Confirmed or Irrevocable Bank Credit is obviously pre-eminent, since the exporter has the undertaking of a first-class bank, sometimes strengthened by the confirmation of a local bank, that his drawings will be duly honoured, and that the credit cannot be revoked without his previous consent. Hence, although he remains technically liable as drawer for the due payment of all bills drawn, the risk is so slight as to be negligible for all practical purposes, because, if his bills are dishonoured, he can proceed against the issuing bank for reimbursement.

But even in the case of a confirmed credit, the exporter's position varies considerably according to whether a credit is opened by the importer (a) with a bank in *the exporter's own country*; or (b) with a bank *on the importer's side*. In the former case, the exporter obtains the acceptance of a bank in his own country and can turn his bill into cash as soon as his goods are shipped, subject only to the deduction of discount on the face value of the instrument, since all charges in connection with the credit will be borne by the importer. In the second case, the exporter has the option of forwarding the draft (and the documents, in the case of a documentary credit) through his own bank for acceptance by the bank in the importer's country and eventual collection, or of negotiating the bill with his own bank. Whichever course he adopts he must bear not only the usual charges for discounting, but also his own bank's charges for the service of obtaining the foreign bank's acceptance and collecting the proceeds in due course.

Alternatively, the exporter may open an acceptance credit with

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his own bank or with a London accepting house, in which case he is placed in almost exactly the same position as if a confirmed credit were opened by the foreign importer (see page 510). This method is of special value where the foreign importer is either unable or unwilling to open a credit of any kind, or where the goods concerned are being sent out on consignment, as may arise, for example, when an attempt is being made to develop a new market. Such a credit is ordinarily granted either on the issuer's own knowledge of the exporter, or against the security either of the documents of title to the goods shipped or of some other form of collateral.

A usual arrangement is that the bank or accepting house confirms to the exporter that it will accept bills representing about 75 % of the invoice value of goods exported, provided the bills are accompanied by the documents relating to the shipment, valid and in order, and provided the exporter signs a Letter of Hypothecation in favour of the grantor of the credit. After examination and verification of the documents, which are retained by the bank or accepting house, the bills are accepted and returned to the exporter, who can immediately have them discounted and the proceeds placed to his credit. The exporter pays a small commission for the facility and for the use of the acceptor's name, and, in return, obtains an instrument which he can at once turn into cash at the lowest market rate of discount.

It is necessarily of first importance that the bank or accepting house which has accepted bills under such a credit should retain complete control of the relative documents. As a rule, these will be sent abroad to a correspondent with instructions that they are to be handed to the consignee only against payment of the full invoice value of the goods.

The bank or accepting house will require the maturity date of the bill it accepts to be so arranged as to allow for the receipt in London of the proceeds of the goods at least three clear days before the relative acceptance matures, and it will further require the exporter to undertake to put it in funds should any such proceeds not have been received by that date.

The position of an exporter is naturally not so good under an Unconfirmed or Revocable Credit, since he has no banker's assurance that his draft will be paid in due course, and he may go to the trouble of preparing his goods for export only to find that the credit has been cancelled before the shipment is actually made. On the other hand, the opening of a credit of even this less favourable type is not without its advantages to him. It enables him to draw bills on

a bank instead of on his unknown correspondent, and he is thereby provided with a discountable instrument instead of one which he might otherwise have to send abroad for collection, during which time he would, of course, be out of a certain portion of his capital and remain liable on his signature as drawer until payment was effected. In the latter connection his position is improved, as we have observed, if the credit permits him to draw the bills "without recourse", or if it authorises the negotiating bank to pay him cash, *without the drawing of a bill*, merely against delivery of the documents relative to the goods, as frequently happens, for example, in the case of shipments of fruit and wheat from the United States to Europe.

Unless the importer is a firm or person of reputed standing, the exporter's position is least favourable when he draws his bill direct on the importer under a Negotiation Credit or Authority to Negotiate. In such circumstances he has no undertaking from the bank that his bills will be accepted and therefore cannot be sure that the bank through whom the credit was advised will negotiate his bills in due course. He will, moreover, be charged discount at the rate ruling in the foreign centre for *trade* acceptances, together with the bank's commission for remitting the bill and ultimately collecting the proceeds.

If, however, London rates of discount are comparatively high, a British exporter will try to arrange with the importer for a sight credit or one which provides that the exporter shall draw usance bills on the issuing bank abroad, thus possibly securing the more favourable terms of discount prevailing on the other side. In such a case, the question of exchange would have to be taken into account, since the bills would usually be drawn in foreign currency.

Between countries such as Great Britain and the United States, which have highly developed acceptance markets, the method of finance employed will depend largely on the relative interest rates in the two centres. For example, shipments of grain and cotton from the United States to this country are usually financed by London acceptance credits, but if interest rates are markedly lower in New York than in London, the tendency will be for New York credits to be used.

Marginal Deposit Receipts.—Where bills are drawn direct by an exporter on an importer abroad, it occasionally happens that the standing of the parties is not sufficient to enable the banker to negotiate the bills for their full value. As a result, it is the practice of banks to advance a specified percentage of the value of each draft and to retain a margin, usually of about 25 %, as security. The amount so retained

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is placed to the credit of the drawer on *Marginal Deposit Account*, which carries interest at agreed rates (usually at approximately the same rate as that charged on the bill) and in respect of which a *Marginal Deposit Receipt* is commonly issued in favour of the customer. The receipt usually specifies that the funds are retained by the bank against all maturing bills, but the practice is to release the margin applicable to each bill as soon as advice is received of payment of the bill.

The So-Called "Red Clause".—A facility sometimes granted to the exporter in connection with credits, particularly those financing wool shipments from South Africa and Australia, is that afforded under what is known as the "Red Clause", for the reason that it is given prominence by being printed in red on the credit form. Its object, generally speaking, is to empower the negotiating banker to grant limited accommodation to an exporter who is not financially strong, and who requires a payment on account of the goods ordered before he can place them in the hands of the shipping company, and thus obtain the bills of lading for attachment to his draft. The clause may authorise the negotiating banker to grant the accommodation either against the exporter's cheque or receipt for the funds, or against a warehouse certificate or receipt for the goods concerned. In the former case, the amount of the advance will be repaid by the exporter out of the proceeds of his discounted bill drawn against the shipment. In the second case, the warehouse receipt or certificate must be released by the bank to enable the exporter to ship the relative goods, and it is usual to grant this release against the exporter's signature to a trust receipt or trust letter. In due course, the temporary advance granted to the exporter against the warehouse receipt is repaid by him out of the proceeds of the bill drawn against the shipment and presented to the negotiating banker with the documents required by the terms of the credit. Thus the effect of the "Red Clause" is really to provide a "credit within a credit", but this secondary accommodation is necessarily restricted to a shorter period than the major contract from which it is derived.

The following is a typical wording of the clause:—

As *Messrs. Jones* may have to pay for and incur expenses in connection with this shipment before they can lodge with you the bills of lading, we authorise your *Sydney* office to grant them advances to the extent of £300 in all repayable by the proceeds of the drafts negotiated under this credit. It is to be clearly understood that you are not to be responsible for the application of the moneys so advanced, and, in consideration of your *Sydney* office making such advances, we undertake to repay you on demand any sums owing by the said *Messrs. Jones* in respect of such advances, for which purpose we agree that the statement of your *Sydney* office shall be regarded as conclusive proof of *Messrs. Jones'* indebtedness.

A credit containing a clause of this nature is known as a "*Packing Credit*", while the overdrafts granted under this clause are often called "anticipatory overdrafts" or "anticipatory advances".

In South Africa the financing of goods from up-country to the coast for purposes of shipment has been simplified by the fact that railway receipts have been made negotiable instruments, carrying a full title to the goods to which they relate. Overdrafts under a "Red Clause" can thus be thoroughly secured by the deposit of such receipts.

Standardisation of Bank Credits.—Credits issued by banks in this and other countries partake of a great variety of forms. The vast majority of them are used in international trade, and, since at least two countries are always involved, it is sometimes difficult to ensure that a credit is applied exactly as it is intended, because there are marked differences in the practice relative to these credits, not only as between the various countries, but also in individual countries. From time to time efforts are made to achieve some degree of standardisation or uniformity, with the object of reducing the danger of losses and disputes to bankers and traders alike. The International Chamber of Commerce, in particular, has worked actively in this direction, and has issued for the guidance of bankers and others a set of Uniform Regulations for Commercial Documentary Credits. The object of these regulations is to bring into line international practice on a number of points where practice had formerly differed; but, as far as this country is concerned, that object has scarcely been achieved, as the British representatives to the Chamber made reservations on the most important of the points involved. The following noteworthy features of these regulations may, however, be usefully perused as expressing an expert view on various points of practical and legal interest:—

- (a) All credits should be classed as "revocable" or "irrevocable". These terms are used in preference to the terms "confirmed" and "unconfirmed" discussed earlier in this chapter. The term "confirmed" should be used in the American sense to denote a credit in which an agent or correspondent of the issuing bank, in advising the beneficiary of the opening of the credit, *adds his own confirmation*.
- (b) Revocable credits are not legally binding undertakings between bank and beneficiary. Such credits may be modified or cancelled at any moment without notification to the bene-

ficiary. But when a credit of this nature has been advised to a correspondent, its modification or cancellation can take effect only upon receipt of notification by the said correspondent or by the firm to which the latter has advised the credit.

- (c) Through bills of lading, issued by official agents of steamship companies, may be accepted, but bills of lading issued by forwarders will be refused, as also will bills of lading for shipments by sailing vessels.
- (d) Shipping documents bearing reservations as to the apparent good order and condition of merchandise will be refused.
- (e) When other documents, such as consular invoices or certificates of weight, quality or analysis, are called for, without further definition, such documents may be accepted as presented.
- (f) The period for which all irrevocable credits are to remain in force must be stipulated. The validity of a revocable credit, if no date is specified, will be considered to have expired six months from the date of the notification sent to the beneficiary by the bank with which it is opened; and this bank will refuse payment after six months unless its customer gives specific instructions to the contrary.

The above recommendations were all accepted by the British delegates; but they are in no sense authoritative, as the British banks have not subscribed to them.

In connection with certain other regulations, the British delegates made the following reservations:—

- (1) "Received for Shipment" or "along-side" bills of lading are not accepted by British banks unless they are specifically authorised.
- (2) It is not the practice in London to accept a certificate of insurance without specific instructions.
- (3) Unless otherwise instructed, banks may not pay for partial shipments.

Credit Information.—An important part of a bank's business in connection with the financing of foreign trade is that of obtaining and keeping up-to-date records of the standing and credit of those on whose names the bank is likely to have to rely in discounting or accepting bills of exchange. In a large bank this work is performed by a special section, known as the "Information" or "Intelligence" Department, wherein up-to-date records (including "Opinions" and

"Reports") are maintained on a card index system, based on information collected by the bank from other banks, agents and correspondents, and from such recognised sources as *Seyd's List*, *Perry's Gazette* and *Bradstreets' Ratings*. In a small office the same function will be performed by a Confidential Credit Book, in which are recorded details affecting the credit, standing, acceptances, bills of sale, etc., of the bank's own customers and others whose financial position the bank may require to know during the course of its business.

Closely associated with these records are the "Acceptance Registers", "Liability Files" and "Discount Ledgers", in which are recorded details of any direct or contingent liabilities of the bank's customers on bills, debtor current account, credits and so on. It need scarcely be stated that these records are worse than useless if they are not kept absolutely accurate and entirely up to date.

EXPORT CREDITS INSURANCE.

One result of the collapse of credit and the failure of confidence which followed the Great War was to place serious obstacles in the way of the resumption of trade with many countries, mainly because neither merchants nor bankers were prepared to face the extraordinary credit risks involved. It soon became apparent that the position was likely to be especially grave in the case of our own country, so essentially dependent on a large stream of exports, and it was recognised that the revival of British overseas trade in several directions was possible only if the efforts of private traders were reinforced by State action.

Exhaustive enquiry among trading interests on this side revealed the fact that there was a considerable amount of business offering which exporters were unable to undertake because (a) they were unwilling to shoulder the exceptional risks involved, as in the case of a country where internal economic conditions were disturbed or uncertain; or (b) they were unable to finance the business owing to their inability to discount the relative bills with a bank; or (c) they were unwilling to face the risk and unable to obtain the necessary financial accommodation. The first of these difficulties could, of course, be covered by *Credit Insurance* (i.e., a form of insurance whereby the insurer agrees to indemnify the insured for any loss suffered by him through the failure of his debtors to meet their obligations), but this business was then in its infancy and, in some cases, the premiums were higher than exporters were prepared to pay. Accordingly, the

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Department of Overseas Trade formulated a scheme with the intention of relieving exporters of some part of the risk and, at the same time, of increasing the security attaching to their bills so as to enable them to get such bills discounted by a bank at a reasonable rate.

Government Export Credits Guarantees.—The details of the Government Export Credits Scheme have been varied from time to time, but, at present, there are four essential features of the arrangements:—

- (1) In return for a premium paid by an exporter, the Export Credits Guarantee Department is authorised, until March, 1940, to guarantee, on behalf of the Government, up to 75 % of any losses incurred by British exporters in connection with the export of British goods.
- (2) The guarantees apply only to goods which are wholly or partly produced in the United Kingdom, since the main object of the scheme is to foster employment in this country.
- (3) The guarantees are unconditional and cover all risks, while payment is made as soon as possible after the default of the foreign importer, up to the limit stipulated.
- (4) Guarantees may be given in respect of all the markets of the world, and apply to all goods except munitions of war.

There is now in operation what is known as a "Comprehensive Guarantee", under which the exporter is covered in respect of any goods shipped within a period of twelve months provided the credit allowed to foreign importers does not exceed a limit approved by the Department. By this means, a great deal of unnecessary formality is avoided. The exporter is enabled to transact his overseas business expeditiously, he is protected against loss through bad debts, and, without difficulty or delay, he can obtain advances from his own bank against shipments of goods as they are made.

The scheme comprises two main types of agreement, known as Contract A and Contract B. Under the former type the Department undertakes to indemnify the exporter against losses on bills. Contract B has been devised to facilitate the finance of exports by the banks, for it amounts to a guarantee given by the Department to the banker who discounts bills drawn by the insured exporter.

As the premiums charged by the Department for guarantees under the latest scheme are fixed on an economic basis, the scheme has proved to be self-supporting. Moreover, the Department has shown itself fully alive to the necessity for amending or extending the arrangements to meet new conditions as they arise.

Credit Insurance by Private Organisations.—The facilities thus provided by the Government have for some years been offered by private organisations formed under influential auspices, in particular the Trade Indemnity Co., and General Trading and Finance, Ltd. These *credit insurance companies*, as they are called, are open to give undertakings, in the nature of guarantees, whereby they hold themselves indefinitely responsible, in return for a premium, for any loss up to a specified limit which bankers or traders might sustain in connection with the export of goods.

The insurance is effected under a tripartite contract between the company, the bank concerned and the trader. The latter is required to take out a *Bill of Exchange Credit Policy*, on the strength of which the company provides the banker with what is known as a *Banker's Bond*, constituting an undertaking by the company to indemnify the bank (up to an agreed limit) within three months from the date of the default by the foreign importer, in respect of the amount of any bill dishonoured, together with the bank's charges and loss of interest, if any. The advantage of thus insuring against the risk that the foreign customer will fail to make payment, is that the exporter is enabled to accept orders from buyers whose credit he would not otherwise rely upon, while, at the same time, it enables him to increase his turnover of capital.

Apparently, however, traders were slow to realise the benefit afforded by this form of protection until the matter was given publicity by the inception of the Government scheme. Since then it has become obvious, from the extent to which the traders have availed themselves of Government help, that the supply of these facilities by private enterprise is much below the potential demand, and, in spite of the anxiety of the Government to hand over its responsibility in this direction to commercial organisations, there is, as yet, little likelihood that it will be able to do so for some time to come, since the private insurers place many restrictions on the type of business they will undertake.

Similar credit insurance organisations are at work in other countries, especially in the United States and Germany. In the former country, internal traders have long been protected to a material extent by the excellent credit information mechanism available through the services of such well-known bureaux as Dunn and Bradstreets, but in recent years steps have been taken to extend credit agencies in the international field. The American National Chamber of Commerce and the National Credit Men's Association have been giving increasing

attention to this aspect of the matter, while, in the actual provision of credit insurance facilities, an association known as the American Manufacturers' Foreign Credit Underwriters has been particularly successful. In Germany, there exists what is known as the "Hamburg System of Credit Insurance", originated by the Hermes Credit Insurance Company, of Berlin, in collaboration with the German Government, whereunder a trader can insure his banker against any risks which the latter may incur by opening a bank credit in the trader's favour.

Vigorous efforts to extend the knowledge and application of credit insurance amongst traders throughout the world are being made by the International Credit Insurance Association, which has been responsible for a number of important conferences in Paris and London, called with the object of investigating the best means by which this class of insurance may be developed and applied for the furtherance of business and industry. Considerable importance is attached by the Association to the establishment of close relationship between credit insurance and banking interests, since it is realised that the removal of the multifarious obstacles to the development of international trade can be greatly assisted by effective co-operation between these agencies

Del Credere Business.—Another form of credit insurance, which is not well-known, is that undertaken by some of the accepting houses. Such a house will sometimes be willing, for a consideration (known as a *del credere* commission), to add its signature as an indorser to a bill. Such an indorsement is known as an *aval* and has the effect of adding to the bill the security of the accepting house's name, so making the bill readily discountable. Clearly the arrangement gives no protection to the trader (who is the drawer), but it enables him to get his bill discounted at a fine rate. The system is also useful to the smaller banks, who, having discounted bills for their customers, may get the accepting house to indorse them, and so assume liability for their payment and enable them to be discounted at very fine rates.

PART II

THE ARITHMETIC OF FOREIGN EXCHANGE

CHAPTER XXIII

ARITHMETICAL OPERATIONS AND CONTRACTED METHODS

THE imperative need for speed as well as accuracy in calculations which have to be made in a busy commercial house must be obvious to every reader. For this reason, and, at the risk of covering ground which should already be familiar, a few examples of abbreviated and contracted arithmetical methods are appended.

1. Abbreviated Multiplication.—The following short cuts should always be used.

To multiply by—

- 5 add a nought, and mentally halve.
- 9 " " " deduct multiplicand.
- 11 " " " add multiplicand.
- 20 " " " double.
- 25 add two noughts, and mentally divide by 4.
- 125 " three " " " " " " 8.

Much labour can be saved, when multiplying two quantities, by a judicious arrangement of the work, and by keeping a careful watch for digits or sets of digits in the multiplier, which are multiples of other digits following or preceding them.

In deciding which of two quantities to take as the multiplier, select that one which the more easily lends itself to this method.

Example 1.

$$\begin{array}{rcl}
 324567 & \times & 13212 \\
 \hline
 13212 & & \\
 \hline
 3894804 & = & \times 12 \quad 12 \\
 42842844 & = 1100 \times 12 = & 13200 \\
 \hline
 4288179204 & & \underline{13212}
 \end{array}$$

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Choose 13212 as multiplier, since 324567 cannot easily be split up. Multiply first by 12, and then multiply the first product obtained by 11, taking care to place the first figure obtained in the second multiplication under the third place figure of the first product.

Example 2.

$$\begin{array}{r}
 765389 \quad \times \quad 189279 \\
 \hline
 189279 \\
 6888501 \quad \times \quad 9 \\
 20665503 = 30 \times 9 = 270 \\
 144658521 = 700 \times 270 = 189000 \\
 \hline
 144872064531 \quad \hline
 189279
 \end{array}$$

189279 makes the best multiplier. Multiply first by 9, then multiply the first product by 3, and so on.

Example 3.

$$\begin{array}{r}
 561243 \quad \times \quad 168852 \\
 \hline
 168852 \\
 6734916 \quad \times \quad 12 \\
 47144412 = 70 \times 12 = 840 \\
 94288824 = 200 \times 840 = 168000 \\
 \hline
 94767003036 \quad \hline
 168852
 \end{array}$$

In the last example we obtain three products instead of six, and the saving is considerable. The student should be continuously on the watch for similar cases in which a multiplier can be split up into its components, and should note that the presence of a decimal point does not hinder the application.

2. Abbreviated Division — The Italian Method. — The Italian method of division provides for the simultaneous performance of the operations of division and subtraction as the division proceeds, and effects a great saving of time and labour.

In the usual method of long division, the products obtained by multiplying the divisor by the digits in the quotient are written down, and then subtracted, but in the Italian method the remainder *only* is written down as we proceed, the multiplication and subtraction being performed mentally.

An example will make this clear:—

Example 1.— $257868 \div 1102$.

METHOD:—

- (1) Draw a line under the figures of the dividend required for the first division.
- (2) Multiply the divisor by the first figure in the quotient, and subtract as you proceed, writing down the figures in the remainder.
- (3) Bring down the next figure of dividend, draw a line and proceed as before, using the second figure of the quotient, and so on.

1102)257868(234	^(a) $2 \times 2 = 4, \quad 4 \text{ from } 8 = 4 \text{ (written down).}$
<u>3746</u>	$2 \times 0 = 0, \quad 0 \quad ,, \quad 7 = 7 \quad ,, \quad ,,$
4408	$2 \times 11 = 22, \quad 22 \quad ,, \quad 25 = 3 \quad ,, \quad ,,$

Bring down next figure 6, and so on for other lines, until the answer is obtained.

In practice, instead of subtracting, we write down as the remainder the figure required to make up to the figure above the product obtained by multiplying as in column (a), adding to the next multiplication any resulting tens figure.

Example 2.— $78934563 \div 1768$.

Proceed as follows:—

1768)78934563(44646	^(a) ^{(b)(c)} $4 \times 8 = 32 + 1 = 33$
<u>8214</u>	$4 \times 6 = 24, \quad 24 + 3 = 27 + 2 = 29$
<u>11425</u>	$4 \times 7 = 28, \quad 28 + 2 = 30 + 8 = 38$
<u>8176</u>	$4 \times 1 = 4, \quad 4 + 3 = 7 + 0 = 7$
<u>11043</u>	
Remainder <u>435</u>	

Column (a) gives the figures to be written down for the remainder. Column (b) gives the figures to be carried forward at each step. Column (c), read upwards from 7, the bottom figure, indicates that the working is correct.

This method can be applied to decimals, and also to compound division involving money, weights and measures, and it should always be made use of by the student for these calculations. In such cases the compound quantities should be decimalised, and the division proceeded with in the ordinary way.

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Example 3.—£7215 16s. 9d. $\div$ 234.

$$£7215 \text{ 16s. 9d.} = £7215 \cdot 8375.$$

$$234 \overline{)7215 \cdot 8375} (30 \cdot 8369$$

$$\underline{195 \ 8}$$

$$\underline{8 \ 63}$$

$$\underline{1 \ 617}$$

$$\underline{2135}$$

$$29$$

$$= £30 \text{ 16s. } 8\frac{3}{4}\text{d.}$$

Contracted Methods applied to Decimals.—Decimal notation is used in most business calculations, and for practical purposes it is usually only necessary to work results correct to a given number of decimal places. By using contracted methods all superfluous work is avoided without affecting the accuracy of the result. For instance, in dealing with money, a calculation to the third place of decimals gives a result correct to the nearest farthing. In working problems involving decimals, the result should be obtained to one place more than is actually necessary, so as to ensure that the subsequent approximation is correct to the place required.

In approximating a decimal to a required place, allowance must be made for the succeeding figure, and if this is 5 or more, 1 should be added to the last digit required.

Examples :—

345·627456 is 345·6 correct to one place (nearest tenth).

345·63 „ „ two places (nearest hundredth).

345·627 „ „ three places (nearest thousandth).

345·6275 „ „ four places (nearest ten-thousandth).

345·62746 „ „ five places (nearest hundred-thousandth).

Addition and Subtraction.—In addition and subtraction the rule for obtaining the sum of several decimal quantities approximately correct to a given place is simple enough.

Rule: Approximate the quantities to one place more than that required, and add or subtract to this place, approximating the answer obtained to the required place.

This rule generally gives sufficiently correct results, but if a large number of quantities are to be added, two or three extra places should be allowed, on account of the large carrying figures.

Example 1.—Add $\cdot 00743$, $4\cdot 03459$, $2\cdot 76745$, $17\cdot 68$, $8\cdot 5916$ and $6\cdot 54329$ correct to two decimal places.

(a)	(b)
In full	Contracted method
$\cdot 00|743$	$\cdot 00|7$
$4\cdot 03|459$	$4\cdot 03|5$
$2\cdot 76|745$	$2\cdot 76|7$
$17\cdot 68$	$17\cdot 68$
$8\cdot 59|16$	$8\cdot 59|2$
$6\cdot 54|329$	$6\cdot 54|3$
<u>$39\cdot 62|436$</u>	<u>$39\cdot 62$</u>
$= 39\cdot 62$ to two places.	

The third place in the answer is not written down, but allowance is made for the figure carried.

Example 2.—Subtract $29\cdot 7653929$ from $47\cdot 876549$ correct to three places.

$$\begin{array}{r} 47\cdot 876|5 \\ 29\cdot 765|4 \\ \hline 18\cdot 111| \end{array} = \text{Answer correct to three places.}$$

Example 3.—Subtract $107\cdot 6348987$ from $207\cdot 3214579$ correct to five places.

$$\begin{array}{r} 207\cdot 32145|8 \\ 107\cdot 63489|9 \\ \hline 99\cdot 68656 \end{array} = \text{Answer correct to five places.}$$

To obtain the answer *approximately correct* to five places, we add 1 to the fifth place to allow for the 9 in the sixth, and obtain, as the answer, $99\cdot 68656$.

Contracted Multiplication of Decimals.—In multiplying two quantities correct to a given place, the calculation should generally be made to one place more than that required, so as to obtain a proper approximation.

The following method should be used:—

- (1) Choose as multiplier the quantity which will give least work.
- (2) Reverse the multiplier and place the units digit under that digit in the multiplicand which is one place further to the right than the number of places required correct. If the multiplier has no units figure, supply its place with a 0.

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- (3) Multiply each figure of the multiplier into the digit directly above it, and those to the left of it, allowing for the nearest multiple of 10 from the figure to the right.
- (4) Set down the products so that the right-hand figure in each case is directly under the units figure in the multiplier.
- (5) The decimal point will be in the same place as in the multiplicand if the figures are all kept in proper columns.

Example 1.

$373\cdot86150 \times 27\cdot295$ to three places.

.59272

7477·2300

(a) $27\cdot295$ is best multiplier.

2617·0305

(b) Place units figure 7 under fourth place digit 5 of the multiplicand.

74·7723

33·6475

(c) Multiply $2 \times 0 = 0$ which is set down in fourth place under units figure 7.

1·8693

10204·5496

$7 \times 5 = 35$, $\therefore 5$ goes in fourth place.

Answer correct to three places is 10204·550.

Example 2.

$1234\cdot5672 \times \cdot003241$ to three places.

142·3000

3·7037

(a) No units figure in $\cdot003241$, therefore place 0 under 2 and reverse.

·2469

·0494

(b) Multiply $3 \times 5 = 15 + 2$ carried (18 is nearer 20 than 10), gives 7 to be placed in fourth place.

·0012

Answer = 4·001

Method of Prediction.—When multiplication is to be done to a certain degree of accuracy only, it is often unnecessary to use all the figures in the numbers that are multiplied together. Hence, if we can determine how many figures we shall need at each stage of the calculation, we can economise our labour very much. For this purpose the *Method of Prediction* is used.

The method is very simple, and can be applied very quickly; but, like many other things that are quite easy to put into practice, it needs a somewhat long explanation.

RULES FOR MULTIPLICATION.

FIRST STEP.—Make a rough estimate of the product by approximating the given numbers to one figure accuracy and multiplying them together. This will indicate the position of the decimal point in the result, and show that the final answer will contain either (a) a given number of digits to the left of the decimal point, or (b) a given number of noughts to the right of the decimal point.

Example 1.— $22 \cdot 1324156 \times 4 \cdot 3256398$ correct to two places.

This is, roughly, $20 \times 4 = 80$.

Hence the answer will have two digits to the *left* of the decimal point.

Example 2.— $11 \cdot 321456 \times \cdot 00032392$ correct to three places.

This is, roughly, $10 \times \cdot 0003 = \cdot 003$.

Hence the answer will have two noughts to the *right* of the decimal point before the first significant figure occurs.

SECOND STEP.—Using the information thus obtained by our rough estimate, we now have to determine how many of the original figures in each of the quantities to be multiplied we may use in our multiplication in order to obtain an answer that will be correct to the necessary number of places. To this end, we apply the following simple rule:—

The number of figures which must be taken in *each* of the original numbers for the multiplication is the number of places required correct in the answer, *plus* two figures (for correct approximation), and (applying the result of our rough estimate) (a) *plus* the number of digits to the left of the decimal point in the product, or (b) *minus* the number of initial noughts to the right of the decimal point in the product. Thus:—

(a) In Example 1:—

Places required correct in answer	= 2
Extra figures for approximation	= 2
Estimated digits in answer	= 2
Figures to be taken in each quantity to be multiplied	= 6

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(b) In Example 2:—

Places required	= 3
Extra figures	= <u>2</u>
	5
Less estimated noughts in answer	= <u>2</u>
Figures to be taken in each quantity	= <u>3</u>

In applying these results, we must take care to write down the *multiplicand* so that its right-hand figure is one place to the right of the *multiplier*: then, automatically, the left-hand figure of the multiplier (reversed) will be one place to the left of the multiplicand. This will give exactly the same arrangement as was described on page 555 under "Contracted Multiplication of Decimals," i.e., the units digit of the multiplier will be under that digit of the multiplicand which is one place further to the right than the number of places required correct.

Observe that, as we have already made a rough estimate of our answer, we need not insert decimal points in our working; for we shall know exactly where to put the decimal point when the multiplication is finished.

The examples would be completed as follows:—

Example 1.— $22 \cdot 1324156 \times 4 \cdot 3256398$ correct to two places.

As we are to take only six figures from the multiplicand, $4 \cdot 3256398$, we approximate it to $4 \cdot 32564$.

$$\begin{array}{r}
 221324 \\
 465234 \\
 \hline
 88530 \\
 6640 \\
 443 \\
 111 \\
 13 \\
 1 \\
 \hline
 9574
 \end{array}$$

Answer correct to two places = $95 \cdot 74$.

In fixing the place of the decimal point in our answer, we must use our rough estimate carefully and intelligently. As, in obtaining it, we approximated our two quantities only to *one figure accuracy*,

it is possible that our final answer might have three, instead of *two*, digits before the decimal point.

Suppose that the figures in Example 1 had been

$$24 \cdot 1324156 \times 4 \cdot 3256398$$

our rough estimate would give us, as before,

$$20 \times 4 = 80$$

But on carrying out our short method multiplication we should obtain

$$\begin{array}{r} 241324 \\ 465234 \\ \hline 96530 \\ 7230 \\ 483 \\ 121 \\ 14 \\ 1 \\ \hline 104379 \end{array}$$

Now we roughly estimated that our answer should be 80, and we know that it cannot be less: it certainly cannot be as little as 10. Actually, our answer is bound to be more than 80 because, in our rough estimate, we took approximate figures (20×4) which are less than those in the quantities to be multiplied. Hence we can see at once that the decimal point comes after the first *three* figures and that our answer must be $104 \cdot 379$.

Example 2.— $11 \cdot 321456 \times \cdot 00032392$ correct to three places.

$$\begin{array}{r} 113 \\ 423 \\ \hline 34 \\ 2 \\ \hline 36 \end{array}$$

Answer correct to three places = $\cdot 004$.

It so happens in this instance that the figure 4 in the multiplier is not needed: but you will easily see that it *might* have yielded a carry-over figure which might have affected the answer. Hence you will realise that the method gives a margin of safety.

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The insertion of the two noughts is done by reference to the original rough estimate on which all the work has been based.

Example 3.— $172.856432 \times .0041587$ to two places.

This is, roughly, $200 \times .004 = .8$.

There are no integers and no initial noughts in the answer.

Places required correct $= 2$

Extra figures for approximation $= 2$

Figures to be taken $= 4$

$$\begin{array}{r}
 1729 \\
 9514 \\
 \hline
 692 \\
 17 \\
 9 \\
 1 \\
 \hline
 72
 \end{array}$$

Answer correct to two places $= .72$.

Observe that, in this case, the 9 in the multiplier was necessary for the sake of the carry-over.

Contracted Division of Decimals.—To find a quotient correct to a given number of places, it is necessary to obtain one place more for correct approximation, though the last figure need not actually be written.

The Method of Prediction is as follows:—

- (1) Make a rough estimate of the answer and so determine the place of the decimal point.
- (2) The number of figures to be retained in the *divisor* is the number of places required correct in the answer, *plus* one figure (for correct approximation) and (applying the result of our rough estimate) (a) *plus* the number of figures to the left of the decimal point in the quotient, or (b) *minus* the number of initial noughts to the right of the decimal point in the quotient.
- (3) The number of figures to be retained in the *dividend* is that which will allow the divisor so obtained to be utilised entirely *or the first division*.
- (4) For the second and subsequent divisions, discard figures one

by one from the divisor so that it will divide into the successive remainders.

Example 1.— $373\cdot81936 \div 8\cdot7243$ correct to two places.

This is, roughly, $400 \div 9 =$ about 40.

Places required correct in answer	= 2
Extra figure for approximation	= 1
Estimated integers in quotient	= 2
Figures to be retained in the divisor	= 5

By inspection, we see that the first figure 8 of the divisor will not go into the first figure 3 of the dividend, but that it will go into the first two figures, viz., 37. Hence, the number of figures to be retained in the dividend must be *one more* than the figures to be taken in the divisor, i.e., 6.

$$\begin{array}{r}
 8'7'2'4'3)373819(42848 \\
 \underline{24847} \\
 7398 \\
 \underline{419} \\
 70
 \end{array}$$

Answer correct to two places = $42\cdot85$.

In the above example the number of figures in the divisor happened to coincide with the number required by the prediction.

The position of the decimal point was determined by the rough estimate.

Example 2.— $373\cdot81936 \div 87\cdot24367$ correct to three places.

Rough estimate = $400 \div 90 =$ about 4.

Number of divisor digits = $3 + 1 + 1 = 5$.

By inspection, number of dividend digits must be one more than number in divisor = 6.

$$\begin{array}{r}
 87'2'4)373819(42848 \\
 \underline{24843} \\
 7394 \\
 \underline{415} \\
 66
 \end{array}$$

Answer correct to three places = $4\cdot285$.

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Example 3.— $373 \cdot 819567 \div 8724 \cdot 3241$ correct to three places.

Rough estimate, $= \frac{400}{9000} =$ about $\cdot 04$

Places required correct in answer $= 3$

Extra figure for approximation $= \underline{1}$
4

Estimated noughts after decimal
point in answer $= \underline{1}$

Number of divisor digits $= \underline{3}$

$$\begin{array}{r} 8'7'2)3738(428 \\ \underline{250} \\ 76 \end{array}$$

Answer correct to three places $= \cdot 043$.

Example 4.— $87 \cdot 64091 \div 3738 \cdot 7$ correct to four places.

Rough estimate, $90 \div 4000 =$ about $\cdot 02$.

Divisor digits, $4 \div 1 = 1 = 4$.

Dividend digits $= 4$.

$$\begin{array}{r} 3'7'3'9)8764(2344 \\ \underline{1286} \\ 164 \\ \underline{15} \end{array}$$

Answer correct to four places $= \cdot 0234$.

Example 5.— $8972 \cdot 8345 \div 241 \cdot 73$ correct to two places.

Rough estimate, $9000 \div 200 = 45$.

Divisor digits $= 2 + 1 + 2 = 5$.

Dividend digits $= 5$.

$$\begin{array}{r} 24'1'7'3)89728(3712 \\ \underline{17209} \\ 288 \\ \underline{47} \end{array}$$

Answer correct to two places $= 37 \cdot 12$.

Division of Money.—The method of prediction is very useful in division of money, and, as before indicated, the answer is taken correct to *three* places to get a result correct to farthings.

Example 6.—£98732 19s. 6d. $\div$ 7456.

Rough estimate = about $\frac{100000}{8000}$ = about 13.

Divisor digits = $3 + 1 + 2 = 6$.

Dividend digits = 6.

As there are only four digits available in the divisor, we must use it three times before contracting it by casting off the figures. This is equivalent to extending it to the estimated six figures by adding noughts.

7'5'4'6)987330(130841, say 13084

$$\begin{array}{r} 23273 \\ \hline 6350 \\ \hline 313 \\ \hline 11 \\ \hline \end{array}$$

Answer = £13 1s. 8½d.

Combined Multiplication and Division.—In many exchange calculations a multiplication of quantities is followed by a division of the product by another quantity.

Example 7. — $\frac{3 \cdot 18252 \times 1 \cdot 92743}{7541 \cdot 09}$ correct to four places.

In the actual working of problems of this type, the numerator should always be calculated first, and the last operation should be the division of the numerator by the denominator. But in making the prediction to minimise the figures used, the last operation—i.e., the division—is always considered first and the other operations are considered in the opposite order to that in which they will actually be done. Thus, in the example:—

Rough estimate $\frac{6}{8000}$ = about .0007 or .001.

When a rough estimate is less than unity and its first significant figure is 5 or more, it is safest to take it as 1 in the next place towards the decimal point. Thus, if a rough estimate gives .0007, call it .001; if it gives .05, call it .1. This leads to the retention of *one more figure* throughout (because the number subtracted in finding the divisor digits is one less) and makes the possibility of a doubtful answer negligible. Hence,

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Divisor digits (taking $\cdot 001$) = 4 (places required correct) + 1 (for approximation) - 2 (noughts) = 3.

Dividend digits = 3.

Digits to be retained in original numerator numbers = 5.

We arrive at the figures to be retained in the original numbers in the numerator by remembering that the dividend is the product of those numbers, and then, according to the Second Step under "Method of Prediction" above, by adding two figures for safety.

The example will appear as follows:—

$$\begin{array}{r}
 31825 \\
 47291 \\
 \hline
 3183 \\
 2864 \\
 64 \\
 22 \\
 1 \\
 \hline
 7'5)613 \text{ (81)} \\
 \hline
 13 \\
 \hline
 \hline
 \end{array}$$

Answer correct to four places = $\cdot 0008$.

Example 8.— $\frac{13 \cdot 8254 \times \cdot 791026}{8541 \cdot 09}$ correct to three places.

Rough estimate $\frac{10 \times \cdot 8}{9000} = \cdot 001$.

Divisor digits = $3 + 1 - 2 = 2$. Dividend digits = 2.

$\therefore$ Figures to be retained in original numerator numbers = 4.

$$\begin{array}{r}
 1383 \\
 0197 \\
 \hline
 968 \\
 124 \\
 1 \\
 \hline
 8'5)109(13 \\
 \hline
 24 \\
 \hline
 \hline
 \end{array}$$

Answer correct to three places = $\cdot 001$.

In this example we calculated on the need for two digits in the product of the numbers in the numerator. As it happened, the carry

over in the addition provided us with three. The method of prediction allows for this possibility, and, when it occurs, the extra figure should be retained. Thus, in this instance we use 109 for our dividend—a three-figure number instead of the two-figure number we expected to get. In other words, the dividend digits predicted are a *minimum*; if another digit is needed it will come automatically.

CHAPTER XXIV

DECIMALISATION OF MONEY AND INTEREST CALCULATIONS

Decimalisation of Money.—The currency units of most foreign countries are divisible into 100 parts, and fractional quantities are expressed as decimals of the unit of currency. As foreign exchange rates are usually quoted in decimals, and as most exchange, as well as the majority of commercial calculations are made in decimals, it is imperative that the student of Foreign Exchange should be able to decimalise any sum in English currency quite quickly and easily. Several methods can be used, but the most practical is given below.

Method :—

- (a) The number of £'s is the integral part of the decimal.
- (b) The number of complete florins gives the first decimal place.

Note : 2s. = $\pounds \frac{1}{10} = \cdot 1$.

- (c) The next two places = the number of farthings in the remaining shillings and pence plus 1 for each complete 24 farthings.
- (d) The remaining places are obtained by dividing by 6 the number of pence and farthings (expressed as a decimal of a penny) in excess of sixpence, or all the pence and farthings if less than sixpence, writing the resulting figures in the fourth and subsequent places.

Example 1.—Express £702 17s. 3½d. as a decimal.

(a)		£702
(b) No. of complete florins	=	·8
(c) Remainder = 1s. 3½d. = 61 farthings + 2	=	·063
(d) Pence and farthings under sixpence		
= $3 \cdot 25 \div 6$	=	·0005416
Answer :		£702·8635416

Example 2.—£302 9s. 10½d.

(a)		£302
(b) No. of complete florins	=	·4
(c) Remainder = 90 + 3	=	·093
(d) Pence and farthings over sixpence	=	·00075
= 4·5 ÷ 6	=	
		<u>£302·49375</u>

Example 3.—£117 18s. 5½d.

(a)	£117
(b)	·9
(c) 23	·023
(d) 5·75 ÷ 6 =	·0009583
	<u>£117·9239583</u>

Example 4.—£129 16s. 0½d.

(a)	£129
(b) Florins	·8
(c) Remainder, 1	·001
(d) ·25 ÷ 6 =	·0000416
	<u>£129·8010416</u>

In these examples the answer is obtained correct to several places of decimals, but for practical purposes it is usually quite sufficient to decimalise an amount correct to three places of decimals. The degree of correctness required will, of course, depend on the problem which has to be solved, and if a multiplication of the amount is necessary, the complete decimal should be obtained by the foregoing method.

The decimalisation of a quantity to the nearest third place is most easily done by the following method, which depends on the facts that—

2s.	=	£ ¹ ₁₀	=	£·1
1s.	=	£ ¹ ₂₀	=	£·05
6d.			=	£·025 (= 24 farthings)
1s. 6d.	=	1s. + 6d.	=	£·075
½d.	=	£ ¹ ₉₆₀	=	£·001 (approximately)

Rule :—

- (1) The number of complete £'s is the integral portion of the decimal.

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- (2) The first place is the number of complete florins, adding $\cdot 05$ for an odd shilling, and $\cdot 025$ for an odd sixpence, in the remainder.
- (3) Add in the second and third places the number of farthings in the remainder $+ 1$ if 12 or over.

By this method the decimal is correct to the nearest third place, and practice will enable the operations to be made mentally, quite rapidly and easily. It should be observed that by many other methods the figure obtained in the third place for amounts such as $10\frac{3}{4}$, $11\frac{3}{4}$, etc., is incorrect by $\cdot 001$.

Example 1.—£414 16s. $10\frac{3}{4}$ d.

(1)	£414
(2) 16s. 6d.	$\cdot 825$
(3) $4\frac{3}{4}$ d. = 19 + 1	$\cdot 020$
	<u>£414·845</u>

Example 2.—£719 17s. $6\frac{1}{4}$ d.

(1)	£719
(2) 17s. 6d.	$\cdot 875$
(3) $\frac{1}{4}$ d.	$\cdot 001$
	<u>£719·876</u>

Example 3.—£814 15s. $5\frac{3}{4}$ d.

(a)	£814
(b) 15s.	$\cdot 75$
(c) $5\frac{3}{4}$ d. = 23 + 1	$\cdot 024$
	<u>£814·774</u>

or £814 15s. 6d. = £814·775

Less $\frac{1}{4}$ d.	= $\cdot 001$
	<u>£814·774</u>

Example 4.—£505 19s. $11\frac{3}{4}$ d.

(a)	£505
(b) 19s. 6d.	$\cdot 975$
(c) $5\frac{3}{4}$ d. = 23 + 1	$\cdot 024$
	<u>£505·999</u>

or £506 = £506

Less $\frac{1}{4}$ d.	= $\cdot 001$
	<u>£505·999</u>

Note : The second method shown in Examples 3 and 4 should always be used when the quantities are nearly complete sixpences or shillings.

In decimalising money, the working need not be shown as in these examples, but should be done mentally, and the result only written down.

Conversion of Decimals into £ s. d.—For most practical purposes it is only necessary to express a given sum of money to the nearest farthing, and this can be obtained by reducing a decimal quantity to its nearest third place, after which proceed as follows :—

- (a) Find by inspection the decimal representing the *nearest* sixpence (*Note :* 6d. = .025, 1s. = .05, 1s. 6d. = .075), and, as previously indicated, the first place of decimal represents florins.
- (b) Ascertain the difference, call this farthings, and add or subtract, as the case may be.

The integral part of the decimal is, of course, £'s.

Example 1.—Convert £.724 to £ s. d.

- (a) Nearest 6d. = .725 or 14s. 6d.
 - (b) Difference = .001, $\therefore$ deduct one farthing.
- Answer = 14s. 5½d.

Example 2.—Reduce £504.939 to £ s. d.

- | | |
|---------------------------|---|
| | £504 |
| (a) Nearest 6d. is .95 or | 19 0 |
| | <hr style="width: 100px; margin: 0;"/> £504 19 0 |
| (b) Difference = .011, | |
| $\therefore$ deduct | 2½ |
| Answer: | <hr style="width: 100px; margin: 0;"/> £504 18 9½ |

Example 3.—Reduce £14.56759 to £ s. d.

Nearest third place = £14.568

- | | |
|--|--|
| | £14 |
| (a) Nearest 6d. is .575 or | 11 6 |
| | <hr style="width: 100px; margin: 0;"/> £14 11 6 |
| (b) Difference = .007, $\therefore$ deduct | 1½ |
| Answer: | <hr style="width: 100px; margin: 0;"/> £14 11 4½ |

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Example 4.—Reduce £909·49876 to £ s. d.

Nearest third place = £909·499

Nearest 6d. would be 909·5 = £909 10s.,

∴ deduct one farthing.

Answer = £909 9s. 11½d.

Here again the examples are given in full for clearness only, but in practice the working should be done mentally and the answers written down immediately.

Examples.

$$£112·836 \qquad \qquad \qquad = \quad £112 \ 16 \ 8\frac{1}{2}$$

$$£17·76375 = 17·764 \qquad \qquad = \quad £17 \ 15 \ 3\frac{1}{2}$$

Great care must be used to see that the decimal representing the *nearest* sixpence is taken, for otherwise the answer will be incorrect. For instance, if in the last example 17·75 were taken as the nearest instead of 17·775, we should add 3½d. (= 14 farthings) instead of deducting 2½d. (= 11 farthings).

As in all ordinary banking transactions, a dealer who is transacting business with a customer will always work to *the nearest penny in his own favour*. If a dealer has to *debit* a customer with, say, £·495, i.e., 9s. 10¾d., the amount actually debited would be 9s. 11d., or possibly even 10s. 0d.; but if the customer were to be credited with the same amount, the credit would be made out for 9s. 10d.

Rates in Sixteenths, Thirty-Seconds and Sixty-Fourths.—It has already been stated that all fractions used in Foreign Exchange are multiples of $\frac{1}{64}$, and that fractions such as $\frac{2}{3}$, $\frac{5}{7}$ and $\frac{3}{11}$ are never used. Moreover, several pence rates, notably the rates between London and India, are always quoted in pence and fractions which are multiples of one sixty-fourth, e.g., 18 $\frac{1}{64}$ d., 17 $\frac{31}{32}$ d., etc. Hence it is extremely important that both the exchange operator and the student of Foreign Exchange should be able to express any such fractions as decimals with the minimum of trouble and delay. Practised exchange operators can write down the decimal equivalents of any multiple of $\frac{1}{16}$, $\frac{1}{32}$ and $\frac{1}{64}$, but for purposes of the average student the best plan is to memorise the decimal equivalents of the fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$ and $\frac{1}{64}$, and thence to determine the equivalents of the multiples of those fractions in accordance with the examples which follow:—

$$\begin{aligned}
 \frac{1}{2} &= \cdot 5 \\
 \frac{1}{4} &= \cdot 25 \quad \therefore \frac{3}{4} = \cdot 75 \\
 \frac{1}{8} &= \cdot 125 \quad \therefore \frac{3}{8} = \cdot 375, \quad \frac{5}{8} = \cdot 625, \quad \frac{7}{8} = \cdot 875 \\
 \frac{1}{16} &= \cdot 0625 \quad \therefore \frac{3}{16} = \cdot 1875, \quad \frac{5}{16} = \cdot 3125, \quad \frac{7}{16} = \cdot 4375 \\
 \frac{1}{32} &= \cdot 03125 \quad \therefore \frac{3}{32} = \cdot 09375, \quad \frac{5}{32} = \cdot 15625, \quad \frac{7}{32} = \cdot 21875 \\
 \frac{1}{64} &= \cdot 015625 \quad \therefore \frac{3}{64} = \cdot 046875, \quad \frac{5}{64} = \cdot 078125, \quad \frac{7}{64} = \cdot 109375
 \end{aligned}$$

The reader will realise that, once the six fractions in the first column are known, any multiples of them can be quickly ascertained, usually in more than one way, e.g.—

$$\begin{aligned}
 \frac{9}{16} &= \frac{1}{2} + \frac{1}{16} = \cdot 5625 \\
 \frac{11}{16} &= \frac{1}{16} + \frac{10}{16} = \cdot 0625 + \cdot 625 = \cdot 6875; \text{ or} \\
 &= \frac{3}{4} - \frac{1}{16} = \cdot 75 - \cdot 0625 = \cdot 6875 \\
 \frac{13}{16} &= \frac{3}{4} + \frac{1}{16} = \cdot 8125 \\
 \frac{9}{32} &= \frac{1}{4} + \frac{1}{32} = \cdot 28125 \\
 \frac{11}{32} &= \frac{1}{32} + \frac{10}{32} = \cdot 03125 + \cdot 3125 = \cdot 34375 \\
 \frac{13}{32} &= \frac{1}{32} + \frac{3}{8} = \cdot 03125 + \cdot 375 = \cdot 40625 \\
 \frac{17}{32} &= \frac{1}{32} + \frac{1}{2} = \cdot 03125 + \cdot 5 = \cdot 53125 \\
 \frac{9}{64} &= \frac{1}{8} + \frac{1}{64} = \cdot 140625 \\
 \frac{13}{64} &= \frac{1}{8} + \frac{1}{16} + \frac{1}{64} = \cdot 203125 \\
 \frac{27}{64} &= \frac{3}{8} + \frac{3}{64} = \cdot 421875 \\
 \frac{49}{64} &= \frac{3}{4} + \frac{1}{64} = \cdot 765625
 \end{aligned}$$

Reduction of Decimals to Sixty-Fourths, etc.—Facility in effecting the reverse operation, i.e., reducing decimals to the nearest thirty-second or sixty-fourth (according to the “step” in the exchange), is equally important. When the decimals corresponding to sixty-fourths are known by heart, the reduction can usually be done by inspection, but, if not, the required result should be ascertained to the nearest sixty-fourth (even though the answer may reduce to 32nds or 16ths), by the following method:—

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Example.—Reduce 18·84316d. to the nearest 64th.

Multiply the *decimal* by 64, viz.—

$$\begin{array}{r} .84316 \\ 8 \\ \hline 6.74528 \\ 8 \\ \hline 53.96224 \end{array}$$

This gives us $18\frac{53.96}{64}$, i.e., $18\frac{54}{64}$ or $18\frac{27}{32}$.

Interest Calculations.—Calculation of interest on a sum of money for a specified period is necessary in many exchange operations. It has been previously pointed out that allowances for interest are necessary in calculating some rates of exchange, and also in determining the prices of bills.

Interest for Multiples or Fractions of a Year.—Simple Interest for a given number of years or for a part of a year is easily calculated by the formula—

$$\text{Interest} = \text{Principal} \times \frac{\text{rate \% p.a.}}{100} \times \text{time.}$$

Example 1.—Find interest on £400 for 2 years at 5 % per annum.

$$\text{Interest} = £400 \times \frac{5}{100} \times 2 = \underline{\underline{£40.}}$$

Example 2.—Find interest on 575 francs for three months at 4 % per annum.

$$\text{Interest} = 575 \times \frac{4}{100} \times \frac{3}{12} = \underline{\underline{5.75 \text{ francs.}}}$$

Mental Methods.—In all exchange operations when interest has to be calculated, the money should be decimalised if it is not already expressed in this way, as the division by 100 is simply performed in all these calculations by moving the decimal point two places. The following methods should be known:—

- (1) Interest at 4 % for three months = $\frac{1}{100}$ of principal, ∴ move decimal point two places to the left (see Example 2 above).

- (2) Interest at 1 %, 2 %, 3 %, etc., for three months can be easily found by moving the decimal point two places, and dividing or multiplying by 4, 2, 3, as the case may be, i.e.—

$$1 \% = \frac{1}{4} \times 4 \%, \therefore \text{divide by } 4$$

$$2 \% = \frac{1}{2} \times 4 \%, \therefore \text{,, ,, } 2$$

$$3 \% = \frac{3}{4} \times 4 \%, \therefore \text{multiply by } \frac{3}{4}$$

$$6 \% = \frac{3}{2} \times 4 \%, \therefore \text{,, ,, } \frac{3}{2}, \text{ etc.}$$

Similarly, interest at 4 % for 6, 9 or 12 months can easily be found by dividing by 100, and multiplying by 2, 3 and 4 respectively.

- (3) Interest at 5 % for one year $= \frac{5}{100} \times 1 = \frac{1}{20}$ th of principal.

$\therefore$ Treat £'s in principal as shillings, e.g., 5 % on £625 for 1 year = 625s. = £31 5s.

5 % on £70 15s. (= £70.75) for 1 year = 70.75s. = £3 10s. 9d.

- (4) Interest at 5 % for one month $= \frac{1}{240}$ of principal.

$\therefore$ Treat £'s of principal as pence, e.g., 5 % on £625 for one month = 625 pence = £2 12s. 1d. By this means interest for any number of months is easily obtained.

- (5) Those rates which are met with in exchange calculations can be worked from the basis of the 5 % rate, which is so easily calculated, as shown above, e.g.—

$$2\frac{1}{2} \% = \frac{1}{2} \text{ of interest at } 5 \%$$

$$1\frac{1}{2} \% = \frac{1}{4} \text{ ,, ,, } 5 \%$$

$$3\frac{1}{2} \% = (\frac{1}{2} + \frac{1}{4}) \text{ ,, } 5 \% \text{ or}$$

$$(1 - \frac{1}{4}) \text{ ,, } 5 \%$$

$$4 \% = \text{Interest at } 5 \% \text{ minus } \frac{1}{5} \text{th of itself.}$$

$$4\frac{1}{2} \% = \text{,, ,, ,, } \frac{1}{10} \text{th ,,}$$

$$6 \% = \text{,, ,, plus } \frac{1}{5} \text{th ,,}$$

$$6\frac{1}{2} \% = \text{,, ,, ,, } \frac{1}{4} \text{ ,,}$$

$$1\frac{1}{2} \% = \frac{1}{4} \text{ of interest at } 6 \%, \text{ etc.}$$

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- (6) In working rates of interest such as $3\frac{1}{2}\%$, $2\frac{1}{2}\%$, etc., it is often easiest to adjust the principal first, then work interest at 5% on the adjusted amount.

$$\begin{aligned} (a) \quad & 3\frac{1}{2}\% \text{ on } £726 \text{ for 1 year} \\ & = 5\% \text{ on } (\frac{1}{2} + \frac{1}{2}) \text{ of } £726 \text{ for 1 year} \\ & = 5\% \text{ „ } £544.5 \text{ for 1 year} \\ & = 544.5s. = £27 \text{ 4s. 6d.} \end{aligned}$$

$$\begin{aligned} (b) \quad & 2\frac{1}{2}\% \text{ on } £827 \text{ for 1 month} \\ & = 5\% \text{ on } £413.5 \text{ for 1 month} \\ & = 413.5 \text{ pence} = 34s. 5.5d. \\ & = £1 \text{ 14s. } 5\frac{1}{2}d. \end{aligned}$$

Interest for a Number of Days.—The calculation of interest for a given number of days is more difficult, as 365 factorises only into 73×5 . The formula is:—

$$\text{Interest} = \text{Principal} \times \frac{\text{rate per annum}}{100} \times \frac{\text{days}}{365}$$

365 rarely divides out, so a division by 73 would be nearly always necessary to solve the formula. However, multiplying both numerator and denominator by 2, we obtain—

$$\text{Interest} = \frac{\text{Principal} \times 2 \times \text{rate} \times \text{days}}{73000}$$

The division of a decimal quantity by 73000 is easily accomplished by the approximation method known as—

The Third, Tenth and Tenth Rule.

- (1) Move the decimal point in the quantity *five* places to the left.
i.e. take $\frac{1}{100000}$ of it.
- (2) Add to the figure so obtained, $\frac{1}{3}$ of itself, then $\frac{1}{10}$ of $\frac{1}{3}$ of it,
and then $\frac{1}{10}$ of $\frac{1}{10}$ of $\frac{1}{3}$ of it.
- (3) Deduct $\frac{1}{10000}$ of the sum so obtained, and the result is
the amount of interest required, expressed as a decimal.

The student should know this rule by heart, and *always* apply it in interest calculations involving days. The product $P \times 2 \times r \times d$ should first be obtained, and then the point moved, bearing in

mind that we need only work to *five* places to get an answer absolutely correct to farthings.

Note: If the interest rate includes a fraction, e.g. $4\frac{1}{2}\%$, it is frequently not necessary to multiply throughout by 2, because the required denominator 73000 will be obtained in multiplying by the fraction.

Example 1.—Interest on £221 17s. 6d. for 31 days at $4\frac{1}{2}\%$ per annum.

$$\begin{array}{r} \text{Interest} = 221 \cdot 875 \times \frac{9}{100 \times 2} \times \frac{31}{365} \\ = \frac{61903 \cdot 125}{73000} \end{array} \qquad \begin{array}{r} 221 \cdot 875 \\ \underline{279} \\ 1996 \cdot 875 \\ \underline{59906 \cdot 25} \\ 61903 \cdot 125 \end{array}$$

$$\frac{1}{100000} \times \text{product} = \cdot 61903 \quad \text{Move point five places and take five places of decimals.}$$

$$\frac{1}{3} = \cdot 20634$$

$$\frac{1}{10} \text{ of } \frac{1}{3} = \cdot 02063$$

$$\frac{1}{10} \text{ of } \frac{1}{10} \text{ of } \frac{1}{3} = \cdot 00206$$

$$\cdot 84806$$

$$\text{Less } \frac{1}{10000} \cdot 00008$$

$$\cdot 84798$$

$$\text{Answer} = \cdot 848 = \underline{\underline{\text{£0 16s. 11}\frac{1}{2}\text{d.}}}$$

Proof.

$$\begin{array}{r} \text{£}221 \cdot 875 \times \frac{9}{200} \times \frac{31}{365} \\ = \frac{22 \cdot 1875 \times 279}{100 \times 73} \end{array} \quad \begin{array}{l} \text{Multiply by 279 to first place only,} \\ \text{because division by 7300 will move} \\ \text{point four places.} \end{array}$$

$$22 \cdot 1875$$

$$\cdot 972$$

$$\underline{199 \cdot 7}$$

$$1553 \cdot 1$$

$$4437 \cdot 5$$

$$\underline{6190 \cdot 3}$$

$$73)61 \cdot 903(\cdot 848$$

$$\underline{3 \cdot 50}$$

$$583$$

$$\text{Answer} = \cdot 848 = \underline{\underline{\text{£0 16s. 11}\frac{1}{2}\text{d.}}}$$

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Example 2.—Interest on 74565·75 francs at $7\frac{1}{2}\%$ per annum for 101 days.

$$\text{Interest} = 74565\cdot75 \times \frac{29}{4} \times \frac{2}{200} \times \frac{101}{365} = \frac{37282\cdot875 \times 2929}{73000}$$

In this calculation two places correct are sufficient, therefore work to 3, moving decimal five places in principal (as halved).

$$\begin{array}{r}
 \cdot 372828\cdot75 \\
 \underline{9292} \\
 3\cdot355 \\
 7\cdot457 \\
 335\cdot546 \\
 745\cdot657 \\
 \hline
 1092\cdot015 \\
 \frac{1}{3} \quad 364\cdot005 \\
 \frac{1}{10} \times \frac{1}{3} \quad 36\cdot400 \\
 \frac{1}{10} \times \frac{1}{10} \times \frac{1}{3} \quad 3\cdot640 \\
 \hline
 1496\cdot06 \\
 \text{Less } \frac{1}{10000} \quad \cdot 15 \\
 \hline
 1495\cdot91
 \end{array}
 \qquad \text{Answer} = \underline{1495\cdot91 \text{ francs.}}$$

Interest on Current Account Balances.—When interest is charged or allowed on a current account (as between a banker and one of his agents or customers) the interest has to be calculated on the balance outstanding from time to time as the account is operated. As it would be tedious to work out the interest on each balance separately, it is usual in practice to employ the “decimal” or “product” system. Every time the account is operated the balance is struck, and that balance is multiplied by the days during which it remains unchanged, thus giving a product which, so far as interest is concerned, represents an equivalent balance for one day. The products thus obtained are extended into a “Dr.” or “Cr.” column according as the balance is debit or credit, and, at the end of the quarter, half-year or other period when the account is ruled off, the products are totalled, and the equivalent in interest at the required rate per cent. is determined either by calculation, as in the following example, or by reference to “Interest Tables”, from which it is possible quickly to determine the equivalent of any product at any rate of interest.

Example 1.—A customer's bank balance on 31st December, 1932, is £640. The following transactions take place:—On 20th January he withdraws £220; on 17th February he pays in £155; on 25th February he pays in £200; on 3rd March he withdraws £850; on 17th March he withdraws £130; and on 25th March he pays in £770. Find the balance up to and including 31st March, if the bank allows $2\frac{1}{2}$ % interest on balances and charges $4\frac{1}{2}$ % on overdrafts.

Solution:—

Date.	Particulars.	Dr.	Cr.	Balance		Days.	Products.	
							Cr.	Dr.
1932		£	£		£			
Dec. 31	By Balance		640	Cr.	640	20	12800	
1933								
Jan. 20	To Self	220		Cr.	420	28	11760	
Feb. 17	By Cash		155	Cr.	575	8	4600	
„ 25	By Cash		200	Cr.	775	6	4650	
Mar. 3	To Self	850		Dr.	75	14		1050
„ 17	To Self	130		Dr.	205	8		1640
„ 25	By Cash		770	Cr.	565	6	3390	
							37200	2690

The number of days between each pair of transactions is counted by omitting the date of the earlier transaction and including the date of the next transaction.

$$\text{Interest on } £37200 \text{ for 1 day at } 2\frac{1}{2} \% = \frac{£37200 \times 5}{365 \times 2 \times 100} = \frac{£186}{73} = £2.548$$

$$\text{Interest on } £2690 \text{ for 1 day at } 4\frac{1}{2} \% = \frac{£2690 \times 9}{365 \times 2 \times 100} = \frac{£2421}{7300} = £0.332$$

$$\text{Difference} \quad \underline{\underline{£2.216.}}$$

$$\text{Balance on 1st April} \quad £565 + £2 \text{ 4s. 4d.} = \underline{\underline{£567 \text{ 4s. 4d.}}}$$

True Present Worth and True Discount.—If a sum of money (P) is subject to interest (r) for a given period (t), the amount (A) of the money plus interest at the end of the period is given by the formula:

$$\text{Amount} = \text{Principal plus} \left(\text{Principal} \times \frac{\text{rate}}{100} \times \text{time} \right)$$

$$\text{or } A = P + P \times \frac{r}{100} \times t$$

$$\text{i.e., } A = P \left(1 + \frac{rt}{100} \right)$$

Now the *True Present Worth* of a sum of money which is due to be paid at the expiration of a given period is that sum which, with

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interest on itself, will amount to the sum of money to be paid; so that, in the formula, P is the true present worth of the amount A . Further, the difference between the sum which is subject to interest and its Amount (including interest) at the end of a given period is known as the *True Discount* on the Amount for the period in question at the rate of interest concerned. In other words,

$$A - P = \text{True Discount on } A.$$

It will be clear that the terms True Present Worth and True Discount involve no principle different from those involved in determining interest, and that true discount on the *amount* corresponds to interest on the principal, whilst true present worth is the principal which ultimately becomes the amount.

Example 1.—What is the true discount on £133 5s. due in six months at 5 % ?

Solution:—

We have to find a sum which, in six months at 5 % interest, will amount to £133 5s.

Now £100 in 6 months @ 5 % becomes £102½.

$$\therefore \text{ True discount on } £102\frac{1}{2} = £2\frac{1}{2}$$

$$\therefore \text{ True discount on } £133\frac{1}{2} = £ \frac{2\frac{1}{2} \times 133\frac{1}{2}}{102\frac{1}{2}} \\ = \underline{\underline{£3 \text{ 5s.}}}$$

Example 2.—What is the true present worth of £500 due in three months, if the discount rate is 4 % ?

Solution:—

In 3 months @ 4 % £100 becomes £101.

$$\therefore \text{ £101 is the amount of } £100 \text{ in 3 months @ 4 \% .}$$

$$\therefore \text{ £500 is the amount of } £ \frac{100 \times 500}{101} \text{ in 3 months @ 4 \% }$$

$$= \underline{\underline{£495 \text{ 1s. 6d.}}}$$

Bankers' Discount (Commercial Discount).—When a bill of exchange is discounted, it is the practice to calculate the discount, at the agreed rate, on the face value of the bill for the period of time which the instrument has to run before maturity. Thus bankers' discount at 4 % per annum on a bill for £100 due in three months' time would be roughly:—

$$100 \times \frac{3}{12} \times \frac{4}{100} = £1$$

In practice, the time is always reckoned *in days*, and allowance is

made for days of grace in the case of bills payable in this country or in any other country where days of grace are allowed (see Chapter II).

Example 1.—A bill for £885 drawn on 12th January, 1933, at four months date, is discounted on 2nd March, 1933, at 3 %. What is the amount of discount?

Solution:—

Allowing three days of grace, the bill is due on 15th May.

From 2nd March to 15th May is $29 + 30 + 15 = 74$ days.

$$\begin{aligned}\therefore \text{Bankers' discount} &= £885 \times \frac{74}{365} \times \frac{3}{100} \\ &= \underline{\underline{£5 \ 7s. \ 8d.}}\end{aligned}$$

Example 2.—What is the face value of a bill drawn at 60 days date if bankers' discount at $2\frac{1}{2}$ % is £5 5s. 0d.?

Solution:—

$$\begin{aligned}\text{Face value} \times \frac{2\frac{1}{2}}{100} \times \frac{63}{365} &= £5\frac{1}{2} \\ \therefore \text{Face value} &= \frac{21}{4} \times \frac{365}{63} \times \frac{200}{5} \\ &= \underline{\underline{£1216 \ 13s. \ 4d.}}\end{aligned}$$

From the foregoing, the following relationships will be clear:

BANKERS' DISCOUNT = INTEREST ON FACE VALUE.

TRUE DISCOUNT = INTEREST ON TRUE PRESENT WORTH.

$\therefore$ BANKERS' DISCOUNT — TRUE DISCOUNT = INTEREST ON
(FACE VALUE — TRUE PRESENT WORTH)
= INTEREST ON TRUE DISCOUNT.

This difference between bankers' discount and true discount is sometimes known as BANKERS' GAIN.

Example 3.—A banker has the alternative of placing £200,000 on deposit with an agent for three months at 4 % per annum, or investing the same amount in three months bills at the same rate of discount. Which is the better proposition, and what does the banker gain by choosing it?

Solution:—

$$\text{Interest on the deposit} = £\frac{200000}{1} \times \frac{3}{12} \times \frac{4}{100} = £2000$$

If the banker invests in bills, every £100 bill costs him

$$100 - 100 \times \frac{4}{100} \times \frac{3}{12} = £99$$

$$\begin{aligned}\therefore \text{For £200,000 banker gets } &£\frac{200000}{99} \text{ in bills} \\ &= \underline{\underline{£202,020 \cdot 20.}}\end{aligned}$$

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Thus his investment in bills yields him £2020·2.

∴ His gain by discounting = £20 4s.

or about $\frac{20 \cdot 20 \times 100}{200000} = \cdot 01 \% \text{ per three months,}$
i.e., $\cdot 04 \% \text{ per annum.}$

Example 4.—The bankers' discount on a bill of exchange due in four months' time is £5 2s. 0d. The true discount on a sum of money due in the same time at the same rate is £5. What is the rate of discount and the face value of the bill? (Work in months and neglect days of grace.)

Solution.—

Since Bankers' Discount — True Discount = Interest on True Discount,

∴ 2s. = Interest on £5 for 4 months.

$$\therefore \frac{1}{10} = 5 \times \frac{4}{12} \times r$$

∴ Rate of discount = 6 %.

Since Bankers' Discount = Interest on Face Value,

$$\frac{1}{10} = \frac{6}{100} \times \frac{4}{12} \times \text{F.V.}$$

∴ Face Value = £255.

Equation of Payments.—It is frequently necessary in practice to determine *what sum of money* can be paid on a specified date, or alternatively *when* a specified sum of money can be paid, in order to discharge several debts falling due for payment at different future times. Thus a merchant who has several bills falling due for payment in the future may offer to discharge them all on a specified date by payment of an equivalent sum of money allowing for interest, or to discharge them all by a single payment on a date which would mean no loss either to him or to the creditor. This date is known as an *Equated Date*, and the process of finding it is known as the *Equation of Payments*.

The method is to multiply each sum to be paid (or the face value of each bill, if bills are involved) by the days which have to elapse before the payment is due, and then to divide the sum of the products so obtained by the sum of the payments (or the sum of the face values in the case of bills).

In calculating the period we must count from the same date for each of the payments. For this purpose we fix on any convenient date as the *zero date*, and add or subtract the resultant products as the case may be.

Example 1.—What is the equated date of the following bills:

£200 drawn on 14th March at 3 months date;
£300 drawn on 5th April at 2 months date;
£500 drawn on 14th April at 4 months date?

Solution:—

(a) Take 14th March, date of first bill, as the zero date.

∴ £200 (1st bill) falls due on 17th June, i.e., 95 days after 14th March.
£300 (2nd bill) falls due on 8th June, i.e., 86 days after 14th March.
£500 (3rd bill) falls due on 17th August, i.e., 156 days after 14th March.

£1000

∴ These payments are equivalent to one payment of £1000 made in

$$\frac{(200 \times 95) + (300 \times 86) + (500 \times 156)}{1000}$$
 days from 14th March
 = 122·8 days.

∴ To nearest day the equated date is 15th July.

(In practice, the calculation should be set out as shown below.)

(b) Take 8th June, due date of second bill (i.e., the *earliest* maturity), as the zero date.

Amount.	Date Drawn.	Due Date.	No. of Days.	Product.
£				
200	14th March	17th June	9	1800
300	5th April	8th June	0	0
500	14th April	17th August	70	35000
<u>£1000</u>				<u>36800</u>
			$\frac{36800}{1000}$	36·8

Say, 37 days from 8th June.

Equated date 15th July.

If we take a zero date which is *later* than the due date of any of the payments the products corresponding to those payments must be *deducted* from the full total.

Example 2.—A customer has accepted the following bills:—

£250 at three months from 3rd March.
£200 at two months from 5th April.
£600 at four months from 14th April.

If discount is 4 % per annum, what sum paid on 1st June will clear the whole debt?

Solution:—

Take 1st June as the zero date:—

£250 (1st bill) is due on 6th June, i.e., 5 days after 1st June.
£200 (2nd bill) is due on 8th June, i.e., 7 days after 1st June.
£600 (3rd bill) is due on 17th August, i.e., 77 days after 1st June.

£1050

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If payment is made on 1st June, the banker must allow 4 % discount on £250 for 5 days, £200 for 7 days and £600 for 77 days:—

$$\begin{array}{r} 250 \times 5 = 1250 \\ 200 \times 7 = 1400 \\ 600 \times 77 = 46200 \\ \hline 48850 \end{array}$$

$$\begin{aligned} \text{Discount on £48850 for 1 day @ 4 \%} &= \frac{48850 \times 4}{365 \times 100} \\ &= \text{£5 7s. 1d.} \end{aligned}$$

$$\therefore \text{Sum to be paid} = \text{£1050} - \text{£5 7s. 1d.}$$

$$= \underline{\underline{\text{£1044 12s. 11d.}}}$$

If, as often happens, a banker has to discount a parcel of bills of different quality which are discountable at different rates, the deductions for discount must be calculated independently for each bill, and the necessary allowances made for stamp duty.

Example 1.—What amount would a banker credit his customer on 14th April for the following bills if all the bills are subject to English stamp duty and the current rates are:—

MARKET RATES:—

60 days bankers' drafts	..	..	$\frac{1}{2}\%$
3 mos. bankers' drafts	..	..	$\frac{1}{2}\%$
4 mos. bankers' drafts	..	..	1%
1 month trade bills	..	..	2%

£200 accepted 16th March, *a* 2 mos. due 19th May, Accepted Acme Cycle Co. Ltd.

£300 accepted 5th April, *a* 3 mos. due 8th July, Accepted Lloyds Bank.

£500 accepted 14th April, *a* 4 mos. due 17th August, Accepted Lazards.

Solution:—

14th April.					
Bill.			Days.	Rate.	Discount.
£	s.	d.			£ s. d.
200	0	0	35	2%	0 7 8
300	0	0	85	$\frac{1}{2}\%$	0 13 1
500	0	0	125	1%	1 14 3
<u>£1000 0 0</u>					<u>2 15 0</u>
Less	3	5 0			Stamp ^s 0 10 0
<u>£996 15 0</u>				Total Charges	<u>£3 5 0</u>

Amount credited to customer: £996 15s. 0d.

CHAPTER XXV

MONETARY UNITS AND SYSTEMS OF THE PRINCIPAL COUNTRIES—SIMPLE EXCHANGES

THE table on pages 584-5 gives particulars of the monetary units of the principal countries of the world. To assist the reader, the Mint Pars of Exchange with this country are given in sterling and also in currency in the case of those countries which are normally on a gold standard. In the following paragraphs brief details are given of the monetary systems of the more important States.

Fineness.—It is necessary to explain that by “fineness” is meant the proportion of pure metal in standard currency units. Our gold currency is $\frac{11}{12}$ ths (or .917) fine, which means that every 12 parts of standard gold from which sovereigns are made contain 11 parts of pure gold and 1 part of alloy. The standard gold of most other nations is $\frac{9}{10}$ ths, .900, or 900 fine, that is to say, there are 900 parts of pure gold in every 1,000 parts of the currency metal, so that our standard gold is of purer quality than that of most other countries. The reader will observe that it does not matter whether the parts are grains, ounces, pounds, or grammes—the fineness or proportion of pure gold is expressed in the same way.

MONETARY SYSTEMS OF THE PRINCIPAL COUNTRIES.

Great Britain.

4 farthings = 1 penny.

12 pence = 1 shilling.

20 shillings = 1 pound.

40 lbs. troy of standard gold, $\frac{11}{12}$ ths fine, are coined into 1,869 sovereigns.

1 sovereign weighs 123.27447 grains, or 7.98805 grammes, of standard gold.

1 sovereign contains 113.0016 grains, or 7.322381 grammes, of *fine* gold.

1 lb. troy = 12 ozs. 1 oz. troy = 480 grains = 31.1035 grammes.

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Country.	Monetary Units.	Mint Par of Exchange.		Type of Standard.
		Currency.	£ s. d.	
GREAT BRITAIN	Sovereign (= 20 shillings = 240 pence)	—	—	Gold bullion†
BRITISH EMPIRE.				
Aden (<i>see</i> India)	—	—	—	—
Australia ..	Pound (= 20s. = 240d.)	1	1 0 0	Gold bullion†
British Honduras	Dollar (= 100 cents)	4·8665	0 4 1½	Sterling exchange
British North Borneo	S.S. dollar (= 100 cents)	8·57	0 2 4	Gold exchange
Canada ..	Dollar (= 100 cents)	4·8665	0 4 1·32	Gold bullion*
Ceylon ..	Rupee (= 100 cents)	13·33	0 1 6	(<i>See</i> India)
Cyprus ..	Pound (= 180 piastres)	1	1 0 0	Sterling exchange
Hong Kong and Labuan	Dollar (= 100 cents)	—	—	Silver
India ..	Rupee (= 16 annas = 64 pice = 192 pies)	13·33	0 1 6	Sterling exchange
Iraq ..	Dinar (= 1,000 fils)	1	1 0 0	Sterling exchange
Irish Free State	Pound (= 20s. = 240d.)	1	1 0 0	Sterling exchange
Jamaica ..	Pound (= 20s. = 240d.)	1	1 0 0	Sterling exchange
Kenya, Tanganyika and Uganda	Shilling (= 100 cents)	20	0 1 0	Sterling exchange
Malaya (<i>see</i> Straits Settlements)	—	—	—	—
Malta ..	Pound (= 20s. = 240d.)	1	1 0 0	Sterling exchange
Mauritius and Seychelles (<i>see</i> India)	—	—	—	—
Mesopotamia (<i>see</i> Iraq)	—	—	—	—
Newfoundland	Dollar (= 100 cents)	4·8665	0 4 1·32	Gold bullion*
New Zealand	Pound (= 20s. = 240d.)	1	1 0 0	Gold bullion†
Palestine ..	£P (= 1,000 millîmes)	1	1 0 0	Sterling exchange
Rhodesia ..	Pound (= 20s. = 240d.)	1	1 0 0	Gold specie†
Straits Settlements	Dollar (= 100 cents)	8·57	0 2 4	Gold exchange†
Sudan (<i>see</i> Egypt)	—	—	—	—
Union of South Africa	Pound (= 20s. = 240d.)	1	1 0 0	Gold specie†
West Africa ..	Pound (= 20s. = 240d.)	1	1 0 0	Sterling exchange
EUROPE.				
<i>Latin Standard</i> ¹				
Albania {	Lek (= 20 centimes)	25·2215	0 0 9·516	Gold specie and gold exchange*
Latvia ..	Franc (= 100 centimes)			
Lat (= 100 grashi or santimes)				Gold bullion*
Spain ..	Peseta (= 100 centimes)	34·59½	0 0 7	Inconvertible paper
Switzerland	Franc (= 100 centimes)			Gold bullion
<i>Scandinavian Standard</i> ²				
Denmark	Krone (= 100 öre)	18·1595	0 1 1½	Gold bullion†
Estonia ..	Kroon (= 100 cents)			
Norway ..	Krone (= 100 öre)			Gold bullion†
Sweden ..	Krona (= 100 öre)	34·59½	0 0 7	Gold bullion†
Austria ..	Schilling (= 100 groschen)			
Belgium ..	Belga (= 5 francs = 500 cents)	35·00	0 0 6·858	Gold exchange*
Bulgaria ..	Leva (= 100 stotinki)	673·659	0 0 0½	Gold exchange*
Czecho-Slovakia	Krone (= 100 heller)	164·25½	0 0 1½	Gold exchange*
Danzig ..	Danzig gulden (= 100 D.M.)	25	0 0 9·6	Gold exchange*
Finland ..	Markka (= 100 penni)	193·23	0 0 1½	Gold exchange†

* Not effective.

† Suspended.

¹ Including countries which have adopted the same system of currency as the now abandoned Latin Union.

² Including countries which have the same system as the defunct Scandinavian Union.

Country.	Monetary Units.	Mint Par of Exchange.		Type of Standard.
		Currency.	£ s. d.	
EUROPE—(cont.)				
France ..	Franc (≈ 100 centimes)	124.2134	0 0 1.932	Gold bullion
Germany ..	Mark. (≈ 100 pfennige)	20.429	0 0 11.748	Gold bullion*
Greece ..	Drachma (≈ 100 lepta)	375	0 0 0.64	Gold exchange†
Holland ..	Florin (≈ 100 cents)	12.107	0 1 7.824	Gold bullion
(Netherlands)				
Hungary ..	Pengő (≈ 100 fillerorgaras)	27.825	0 0 8.62	Gold exchange*
Italy ..	Lira (≈ 100 centesimi)	92.46	0 0 2.6	Gold exchange (a)
Lithuania ..	Litas (≈ 100 cents)	48.665	0 0 4.932	Inconvertible paper (a)
Luxembourg ..	Franc (≈ 80 pfennige)	175.00	0 0 1.371	Gold exchange
Poland ..	Zloty (≈ 100 grosz)	43.38	0 0 5.5	Gold bullion and gold exchange*
Portugal ..	Escudo (≈ 100 centavos)	110	0 0 2.182	Sterling exchange
Rumania ..	Lei (≈ 100 bani)	813.6	0 0 0.3	Gold exchange*
Turkey ..	Pound, T£1 (≈ 100 piastres ≈ 4,000 paras)	110.71 (piastres)	0 18 1	Inconvertible paper
U.S.S.R. ..	Tchervonetz (≈ 10 roubles)	0.946	1 1 1½	Inconvertible paper
Yugo-Slavia ..	Dinar (≈ 100 paras)	276.32	0 0 0.87	Gold exchange*
AMERICA.				
Argentina ..	Peso (≈ 100 centavos)†	5.05	0 3 11½	Sterling exchange
Bolivia ..	Boliviano (≈ 100 centavos)	13.33	0 1 6	Gold bullion†
Brazil ..	Milreis (≈ 100 centavos ≈ 1,000 reis)	40.7	0 0 5.899	Gold bullion†
Chile ..	Peso (≈ 100 centavos)	40	0 0 6	Gold bullion†
Colombia ..	Peso (≈ 100 centavos)	5	0 4 0	Gold bullion (b)
Costa Rica ..	Colon (≈ 100 centesimos)	10.45	0 1 10.9	Gold bullion*
Cuba ..	Martí (≈ \$20 U.S.)	0.2433	4 1 8.64	Dollar exchange*
	Peso (≈ 100 centavos ≈ \$1 U.S.)	4.8665	0 4 1.32	
Ecuador ..	Sucre (≈ 100 centavos)	24.33	0 0 10	Gold bullion†
Guatemala ..	Quetzal (≈ 60 pesos)	4.8665	0 4 1.32	Dollar exchange
Haiti ..	Gourde (≈ 100 centavos)	—	0 0 9.87	Stabilised at 1 gourde ≈ \$20 U.S.
(Dominica)				
Honduras ..	Lempira (≈ 100 centavos)	9.733	0 2 0.66	Gold exchange†
Mexico ..	Peso (≈ 100 centavos)	9.76	0 2 0½	Gold exchange†
Nicaragua ..	Corloba (≈ 100 centavos)	4.8665	0 4 1.32	Gold exchange†
Panama ..	Balboa (≈ 100 centesimos)	4.8665	0 4 1.32	Gold exchange†
Paraguay ..	Peso (≈ 100 centavos)	5.113	0 3 11½	Inconvertible paper
Peru ..	Sol (≈ 100 centavos)	17.38	0 1 1.81	Gold bullion†
Salvador ..	Peso or colon (≈ 100 centavos)	9.73	0 2 0.6	Gold exchange†
United States ..	Dollar (≈ 100 cents)	8.24	0 2 8.54	Gold bullion†
Uruguay ..	Peso (≈ 100 centesimos)	4.67	0 4 3	Inconvertible paper
Venezuela ..	Bolivar (≈ 100 centavos)	25.2215	0 0 9½	Gold bullion†
ASIA.				
China ..	Shanghai dollar (≈ 100 cents)	—	—	Silver
Dutch E. Indies ..	Guilder (≈ 100 cents)	12.107	0 1 7.824	Gold exchange
Indo China ..	Plastre (≈ 10 francs)	12.42134	0 1 7.32	Gold exchange
Japan ..	Yen (≈ 100 sen)	9.76	0 2 0.582	Gold bullion†
Korea ..				
Persia ..	Riyal (≈ 100 dinars)	20	0 1 0	Gold bullion*
Philippines ..	Peso (≈ 100 centavos)	9.733	0 2 0.66	Dollar exchange
Siam ..	Tical or baht (≈ 100 satangs)	11	0 1 9.82	Gold exchange†
AFRICA.				
Algeria ..	Franc (≈ 100 centimes)	124.2134	0 0 1.932	Gold bullion
Belgian Congo ..	Franc (≈ 100 centimes)	175.00	0 0 1.371	Gold exchange
Egypt ..	Pound (≈ 100 piastres)	97½ pla.	1 0 6½	Gold bullion†
Liberia ..	U.S. dollar (≈ 100 cents)	(See U. nited States)		
Madagascar ..	Franc (≈ 100 centimes)	124.2134	0 0 1.932	Gold exchange
Morocco ..	Franc (≈ 100 centimes)	124.2134	0 0 1.932	Franc exchange
(French)				
Morocco ..	Peseta (≈ 100 centimes)	25.2215	0 0 9.516	Peseta exchange
(Spanish)				
Tripoli ..	Lira (≈ 100 centesimi)	92.46	0 0 2.6	Gold exchange
Tunisia ..	Franc (≈ 100 centimes)	124.2134	0 0 1.932	Gold exchange

* Not effective.

† Suspended.

(a) Exchanges pegged.

(b) Pegged exchange at 105 pesos ≈ \$1 U.S.

Quotations are for gold pesos. To convert the quotation to paper pesos, multiply by $\frac{44}{100}$.

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According to the Coinage Act, 1891, 1,869 sovereigns are to be coined out of 40 lbs. troy of gold, $\frac{11}{12}$ ths fine, and a new sovereign should therefore weigh 123·27447 grains, but a remedy allowance is permitted of $\cdot 4$ of a grain or *three* parts per mille more or less than this legal weight, and of *two* parts per mille in the fineness. Sovereigns cease to be legal tender when they weigh less than $122\frac{1}{2}$ grains and half-sovereigns when less than $61\frac{1}{2}$ grains. The gold coins issued by the mints at Pretoria, Sydney and Melbourne are legal tender here, and the English gold coins are also legal tender in Australia.

Since the passing of the Gold Standard Act, 1925, all gold for coinage must pass to the Mint from the Bank of England, which is compelled by its charter to buy all gold offered to it at the price of £3 17s. 9d. per oz. standard. By the same Act, the Bank was required to sell gold at the rate of £3 17s. 10½d. per ounce standard, provided the amount demanded was not less than 400 ounces troy of fine gold (about £1,700), but this obligation was suspended by the Gold Standard (Amendment) Act, 1931.

Silver Coins.—The common silver coins are the crown, half-crown, florin, shilling, sixpence and threepenny piece. Up to 1920, 66 shillings were coined out of one troy pound weight of silver $\frac{37}{40}$ ths fine, but the silver coins issued since that year are only 500 or $\frac{20}{40}$ ths fine. The coins are made of an alloy of silver with nickel, copper and zinc, and, as the value of the metal from which they are made is much below the face value of the coins, the Government makes a considerable profit on their issue.

Bronze Coins.—The bronze coins (95 parts copper, 4 parts tin, 1 part zinc) are the penny, half-penny and farthing. Legally, 48 pennies must weigh 1 lb. avoirdupois of bronze, or one penny weighs nearly 146 grains; two half-pennies, however, weigh 175 grains.

Bank of England Notes are issued by the Bank of England for amounts of 10s., £1, £5, £10, £20, £50, £100 and upwards. The 10s. and £1 notes were first issued in 1928 to replace the Treasury notes of similar denomination issued by the Government during and after the Great War under the Currency and Bank Notes Act, 1914.

Legal Tender Currency :—

(1) Bank of England notes are legal tender for any amount.

The Bank's 10s. and £1 notes are legal tender in England and Wales, Scotland and Northern Ireland for all purposes, including payment of the Bank's notes of higher denomination.

Bank of England notes for £5 and over are legal tender in England and Wales for payment of £5 or over, except by the Bank or its branches. The Bank's notes of £5 and upwards are not legal tender in Scotland or Northern Ireland.

(2) Gold coins are legal tender for any amount.

(3) Silver coins are legal tender up to 40s.

(4) Copper coins are legal tender up to 1s.

The silver and bronze coins are called *token* coins, as their commodity value is in normal times less than their face value. The limit on the amounts for which they are legal tender keeps other more valuable forms of currency in circulation.

The British Empire.—*Australia.*—The monetary system and standard are identical with those of Great Britain, the coins of gold, silver, and bronze issued by the Commonwealth corresponding in value, weight and fineness with those issued by this country, except that the silver coins are of our old fineness, .925, and that no silver coin above 2s. 0d. is issued. The gold coins are identical with our own, but the silver and bronze coinage is of special design. English coins circulate side by side with the Commonwealth issues.

Notes of various denomination are issued by the Commonwealth Government through the Commonwealth Bank, the central banking institution. The circulation of gold coins has been suspended in Australia as in Great Britain. Owing to financial difficulties in 1930, gold exports from Australia were also suspended, and the Australian pound has depreciated by about 25 % in terms of sterling.

British West Africa. British notes and gold coins circulate in the Colonies grouped under this heading, together with notes of small denomination and token coins of bronze and silver, issued by the West African Currency Board.

Canada. 1 dollar = 100 cents.

Normally, the standard is gold, based on the legal rate of \$4·86½ = £1, or \$1 = 4s. 1·32d. Silver coins of 1 dollar, 50, 25, 10, 5 cents and various smaller tokens of nickel and bronze are issued. The English sovereign and American eagle of 10 dollars are both legal tender to any amount and circulate freely, the eagle being accepted as equivalent to 10 Canadian dollars. The paper currency consists of notes of various denomination issued by the Government and the Canadian banks.

The Canadian authorities continue to insist that Canada is still

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on a gold standard; but, in view of the depreciation of her currency and the restriction of gold exports, it is difficult to see how this claim can be justified.

Ceylon.

1 rupee = 100 cents.

The standard is the Indian rupee (see below). The coinage consists of silver coins of 10, 25 and 50 cents, nickel coins of 5 cents, and copper coins of 1, $\frac{1}{2}$ and $\frac{1}{4}$ cent. Currency notes of various denomination in rupees are also issued by the local administration.

India.

1 rupee = 16 annas.

1 anna = 4 pice.

1 pice = 3 pies.

1 lac or lakh of rupees * = 100000 rupees (written Rs. 1,00,000).

1 crore of rupees = 10,000,000 rupees (do. Rs. 1,00,00,000).

Note: 12,11,07,250 rupees = 12 crores, 11 lacs, 7250 rupees.
Rx. = 10 rupees. Rx. 7,99,00,00 = 79,900,000 rupees.

The standard coin is the silver rupee of 180 grains troy, $\frac{11}{12}$ ths fine, and $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ of the same weight and fineness are called 8-, 4-, 2-anna pieces respectively. The minor coinage consists of nickel coins of 1, 2, 4 and 8 annas, and bronze coins of $\frac{1}{2}$ anna and 1 pice ($\frac{1}{4}$ anna).

The rupee is legal tender for any amount, and, since March, 1927, its gold value is fixed for purposes of conversion at 8.47512 grains pure gold, i.e., 13.33 rupees = 1 sovereign, or 1 rupee = 18d. Between March 1920 and 1927 the sovereign was legal tender in India at the rate of £1 = 10 rupees, but it is now demonetised.

By the Act of 1927, the currency authority was compelled by law to buy gold, and to sell gold (or gold exchange at its option) at the fixed price of 18d. per rupee; but following the suspension of the gold standard by Great Britain, the rupee continued to be linked to sterling at the fixed rate of 18d.; i.e., a "*sterling exchange standard*" was adopted and the value of the rupee was allowed to depreciate in terms of gold. Only the Imperial Bank of India and other specially appointed banks are allowed to deal in foreign exchange.

Irish Free State.—Up to the end of 1928 the circulating media consisted of British coins, Treasury notes, and Irish bank notes issued by the various Irish banks under the Bank Charter (Ireland) Act, 1845. As from the beginning of 1929 the circulating media were replaced by new Irish token currency authorised by the Irish Coinage Act, 1926, and by notes issued under the provisions of the Irish Cur-

* The term "lac" is also used on the London Foreign Exchange Market to signify "one hundred thousand" in connection with other currencies, e.g., "1 lac yen" = 100,000 yen.

rency Act, 1927, in denominations of the *Saorstaaat Pound*, the unit of account. The token coinage consists of silver coins, 750 fine, of 2s. 6d., 2s. and 1s.; nickel coins of 6d. and 3d., and bronze coins of 1d., $\frac{1}{2}$ d. and $\frac{1}{4}$ d.

The notes in circulation are of two classes:—

- (1) **LEGAL TENDER NOTES**, issued by the Irish Currency Commission to the banks against the deposit of gold, British currency, British Government securities, or sight drafts on London. The notes are redeemable in sterling on demand if presented at the London agency of the Commission.
- (2) **CONSOLIDATED BANK NOTES**, issued by recognised banks, and obtained by them from the Currency Commission against the deposit of cash or against the security of trade bills or acceptable evidence of advances granted by the banks. These notes are convertible into legal tender at the Head Offices of the issuing banks.

The free convertibility of Irish currency into sterling forms the basis of the *sterling exchange standard* which has been adopted as a means of ensuring that no exchange difficulties shall disturb the trade relationships between the two countries.

There are no legal restrictions on foreign exchange, but the banks exercise strict control.

New Zealand.—The currency of New Zealand consists of English coins of gold, silver and bronze, together with notes of various denomination issued by the Bank of New Zealand and certain of the Australian banks.

In 1933, New Zealand's industrial position became so adverse that the Government had to intervene and devalue the exchange on the basis of £125 New Zealand per £100 sterling. The six leading banks maintain the exchanges at this level, but there is also an unofficial market.

The Sudan. 1 piastre (= 10 millièmes) = 40 paras.

1 Egyptian pound = 100 piastres.

The gold coins are the Egyptian pound (£E), value 20s. 6d., and the 50-piastre piece of half the value of the £E. The English sovereign is legal tender at 97·50 piastres. Gold coins are not at present issued, the circulating medium consisting of notes.

Silver coins of 1, 2, 5, 10 and 20 piastres, and also several smaller nickel and bronze coins, are issued.

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The Union of South Africa.—The monetary system is the same as that of Great Britain, the South African pound being the standard of value. Early in 1924 a new silver coinage of special design was issued to replace the English and the old Kruger silver coins in circulation. The silver coins are 800 fine.

Notes of various denominations are issued by the South African Reserve Bank, and these are gradually superseding the issues previously made by the various other South African banking institutions.

In view of South Africa's vast gold production, it is not surprising that gold coins continued to circulate in the Union long after they had disappeared in other countries, and that the nation was very loth to follow Britain's lead in 1931 and suspend the gold standard. Actually, this was not done until December, 1932, when bank notes were made inconvertible into gold and exports of the metal were controlled.

The South African banks (like the banks in the other Dominions) have a virtual monopoly of all exchange dealings, rates being fixed by agreement between them. There is, however, a private unofficial market where it is possible to deal at cheaper rates than the official rates. This market consists of large firms with connections in the Dominions and certain London banks outside the "Ring".

In March, 1932, a new coinage was decreed consisting of the *florin* (11·30016 grains of pure gold), the *cent* (1/100 of the value of the florin), and the *rand*, equal to a 10-florin gold piece; of silver coins of 2 florins, 1 florin and 50, 20 and 10 cents; and of bronze coins of the value of 4, 2 and 1 cents.

Rhodesia.—The monetary system is practically the same as that of the Union of South Africa, but the gold standard is not now in operation. Notes are issued by the various banks and no steps have been taken to centralise the issue.

EUROPE.

The Latin Standard.—In 1865, France, Italy, Belgium and Switzerland agreed to adopt a uniform monetary system, and for this purpose formed what was known as the *Latin Union*, which Greece joined later. The Union adopted a double or bimetallic standard of value, based on gold and silver, coins of either metal being made equally legal tender in their respective countries at the legal ratio of 15½ of silver to one of gold. The arrangements provided that the monetary units or standard coins, although of different design and, if

desired, of different names, should all be of the same weight and fineness, and should contain approximately $\cdot 32258$ gramme of gold, 900 fine, giving, in each case, a mint parity with British currency of 25.2215 per £1.

Owing to the great difficulty of maintaining the bimetallic ratio (see Chapter XVIII), the countries concerned had to demonetise silver, while, in consequence of currency difficulties arising from the Great War, the Union had to be dissolved.

Of the original participants only Switzerland still maintains a gold currency standard based on the weight and fineness adopted by the Latin Union. The same gold standard basis has, however, been adhered to in Spain since 1891, and has also been adopted by two of the new post-war European States (Latvia and Albania), each of which has, therefore, a currency whose Mint Par with sterling is nominally 25.2215 = £1.

The various countries whose currencies are now based on this standard, which, for convenience, we describe as the *Latin Standard*, are given below. As a rule, token coins of silver, nickel and bronze are issued by all these countries, but gold does not circulate and the currencies consist largely of paper money of various denomination.

Albania. 1 frane (franchi) = 5 lek = 100 centimes.

The frane contains $\cdot 290322$ gramme of fine gold. Notes, issued by the National Bank of Albania, and silver, nickel and bronze coins circulate.

Latvia (Centre quoted: *Riga*).

1 lat = 100 santimes or graschi.

The currency of the post-war State of Latvia was based in August, 1922, on a monetary unit known as the *lat*, equivalent to the gold franc adopted by the old Latin Union, and thus containing $\cdot 32258$ gramme of gold, 900 fine, or $\cdot 2903$ gramme of pure gold.

Latvia is nominally on a gold bullion standard: but dealings in exchange are subject to such restrictions that the standard is no longer effective.

Spain (Centre quoted: *Madrid*).

1 peseta = 100 centimos.

1 peso duro or piastre = 5 pesetas.

Spain, as we have seen, adopted the same currency system as the now extinct Latin Union, her monetary unit, the *peseta*, having a mint

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parity with the sovereign of 25·2215 pesetas per £1. The monetary system is still legally bimetallic, but in reality the legal tender silver 5-peseta pieces, weighing 25 grammes, 900 fine, form the basis of the currency. In addition to the new gold coins of 5, 10, 20 and 50 pesetas, various minor coins in silver and bronze are issued, but the currency consists chiefly of notes of various denominations issued by the Bank of Spain. The Bank's note issue up to 4 milliards of pesetas must be covered by 40 % gold and 5 % silver, but if the issue is between 4 and 5 milliards, the cover must be as to 50 % gold, and as to another 10 % silver.

In spite of her neutral position during the Great War, Spain, by reason of various internal difficulties, was unable to maintain the parity of the peseta with gold, although the depreciation was at no time very great. Spain has ample gold reserves; but attempts at monetary reform have been defeated by indecisive action, and, later, by political disturbances. There are as yet no prospects of a return to gold in the near future. All exchange dealings are rigidly controlled and at the time of writing the peseta is fairly closely linked to sterling.

Switzerland (Centre quoted: *Zurich* or *Geneva*).

1 franc = 100 centimes.

Switzerland, having remained neutral during the Great War, was able to maintain the gold standard throughout the period of hostilities. Nevertheless, the circulating currency, like that of other European countries, has for some years past consisted mainly of notes of various denomination, together with token coins of silver and nickel.

Early in 1929 an expert Committee, appointed by the Swiss Government to consider the currency position, recommended that the country should return to the full gold standard, and that the circulation of gold coins should be resumed. For the time being, however, the notes of the National Bank were made convertible, at its option, into gold coins, or gold in the form of bars, or *gold exchange*, i.e., a gold exchange standard was adopted. Later, on the location of the Bank for International Settlements at Basle in 1930, Switzerland instituted the gold *bullion* standard; but no further move has been made towards the re-establishment of a gold *specie* standard.

The Scandinavian Standard.

Norway (Centre quoted: *Oslo*).

Denmark (Centre quoted: *Copenhagen*). } 1 Krone = 100 öre.

Sweden (Centre quoted: *Stockholm*). 1 Krona = 100 öre.

Estonia (Centre quoted: *Reval* or *Tallin*). 1 Kroon = 100 sents.

The Scandinavian Mint Convention was formed in 1873 between Denmark and Sweden, Norway joining afterwards.

The original arrangements provided that the gold coins, token coins and central bank notes of each country should be freely accepted in the other countries, and that the coin and note issues of the three countries should be interchangeable. In consequence of the War, the arrangements broke down, and in 1924 the Convention was formally dissolved. In 1931-32, all three countries suspended the gold standard, and at the time of writing, their exchanges are controlled and maintained as closely as possible to a fixed value in terms of sterling. (See Chapter XIX.)

The gold coins legally provided for are 20-, 10-, and 5-kroner pieces, the Mint Regulations prescribing that one hundred and twenty-four 20-kroner pieces, 900 fine, must be coined from 1 kilogramme of fine gold, giving a Mint Par with Britain of 18·159 kr. per £1. Various bronze, nickel and silver coins, as well as notes issued by the respective central banks, are current.

The new post-war Baltic State Esthonia first adopted a standard unit known as the *mark*, having the same weight and fineness as the Swiss franc (i.e., the Latin standard). As a result of currency mismanagement much difficulty was experienced, and in January, 1928, the gold exchange standard was instituted based on the *kroon*. This was given the same metallic content as the Scandinavian currencies, viz., ·403226 gramme of pure gold, so that the mint parity with this country is the same as that of Norway, Sweden and Denmark, viz., 18·159 kroner per £1.

At first a gold exchange standard was maintained, but in June, 1933, Esthonia suspended the gold standard, and the kroon was linked to sterling. This meant a reduction of 35 % in the gold value of the kroon.

Austria (Centre quoted: *Vienna*).

1 schilling = 100 groschen.

The gold standard was adopted by the dual State of Austria-Hungary in 1892, the unit being the gold krone or corona, 3,280 kr. being coined from 1,000 grammes of *fine gold*.

In consequence of the War, the two countries separated under distinct Governments, and in both cases the currencies (and also the exchanges) became considerably depreciated. In 1925 Austria, with the assistance of the League of Nations, remodelled her currency on the basis of a new unit, the *schilling* of 100 groschen, which for purposes

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of conversion was made equal to 10,000 paper kronen of the old currency. By the Mint Regulations, 1 kilogramme of fine gold is coined into 4,723·2 schillings. The 100-schilling piece thus contains 21·17 grammes of pure gold, and the mint parity with British currency is 34·58½ schillings per £1. New silver, nickel and copper tokens have been issued, but some larger coins of the old currency still pass as legal tender at fixed equivalents to the new coinage.

In 1931 dealings in foreign exchange were subjected to official control, the rates being fixed by the Austrian National Bank. But as from September, 1933, control has been relaxed and all private and external debts must be settled at the market exchange of the day.

Belgium (Centre quoted: *Brussels*).

1 belga = 5 francs = 500 centimes.

The currency of Belgium naturally depreciated considerably in value as a result of her participation in the War and of her close relationship with France. In October, 1926, steps were taken to remedy the position. A stabilisation loan was floated by the Belgian Government in London and New York, and the exchange was stabilised at the then prevailing rate of 175 Belgian francs per £1. For exchange purposes a new unit was introduced, known as the *belga*, but internal exchanges are still effected in terms of francs, five paper francs being taken as equivalent to one belga.

The belga is based on the equivalent of ·232456 gramme of gold, $\frac{9}{10}$ ths fine, or ·209211 gramme of fine gold, making the Mint Par of Exchange with Great Britain 35 belgas per £1. No gold coins are at present in circulation, but the subsidiary coinage consists of various coins of nickel and cupro-nickel. The sole rights of issuing paper money are vested in the hands of the Banque Nationale de Belgique, which is compelled to maintain a reserve of at least 30 % in gold, and must redeem its notes in gold, in gold exchange, or in silver at its market value in terms of gold.

The gold exchange standard originally introduced on the stabilisation of the Belgian exchange functioned very successfully and has now been replaced by a gold bullion standard.

Bulgaria (Centre quoted: *Sofia*).

1 leva = 100 stotinki.

After several years of currency mismanagement and financial difficulty, Bulgaria appealed to the League of Nations for assistance with her programme of reconstruction. In 1926 a Refugee Loan was

raised under the auspices of the League, and in November, 1928, arrangements were finally made for the flotation of a Stabilisation Loan of £5,000,000 in London, New York and Paris. The proceeds of the loan were used to stabilise the leva at the new basis of 673·659 levas per £1, or 139 levas per dollar, and a form of gold exchange standard was instituted. Stability of the currency has been well maintained, but, as in most other countries, the exchanges are now subject to considerable restrictions.

The National Bank of Bulgaria is empowered to issue notes of denomination not less than 200 levas, while token coins of silver and baser metal are being issued to replace notes of lower value.

Czecho-Slovakia (Centre quoted: *Prague*).

1 crown or koruna = 100 heller or haleru.

This post-war State adopted the same system as that of Austria-Hungary in pre-war days, so that until February, 1929, it had a mint parity with this country of 24·02 per £1. In consequence of inflation and financial difficulty, the currency depreciated considerably in value, and steps had to be taken to stabilise it on a new basis. Credits were arranged by the Czecho-Slovak National Bank with certain of the principal central banks abroad, and the crown was given a new equivalent of ·04458 gramme of fine gold, giving a mint parity with this country of 164·25½ cr. per £1. The gold exchange standard instituted in 1929 is inoperative, stability of the exchanges being maintained by official control.

In March, 1934, faced with serious financial difficulties, Czecho-Slovakia sought relief in a further devaluation of her currency. The crown was devalued by one-sixth and its new gold content was fixed at ·03715 gramme of fine gold.

Dantzig.

1 florin or gulden = 100 pfennige.

The monetary unit of the Free City of Dantzig is the paper *gulden* of 100 pfennige, equal to ·292895 gramme of fine gold. The currency is a "managed" one consisting mainly of notes of the Dantzig Bank of 10, 25, 100, 500 and 1,000 florins. Its value was originally stabilised at 25 Dantzig gulden to the pound sterling, the Dantzig Bank being required to exchange its notes, not for gold, but for cheques on London at the outgoing specie point of 25·21 fl. per £1. At the lower or incoming specie point of 24·89 fl. per £1 the Bank issued cheques on Dantzig to the Bank of England in exchange for pounds sterling, thus keeping the exchange within the two limits fixed by law.

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Following the suspension of the gold standard in Britain, Dantzig abandoned the sterling standard and linked its currency to gold. Exchange dealings are, however, subject to official control.

The units are always referred to as the *Dantzig* florin or gulden and the *Dantzig* pfennige to avoid confusion with the Dutch florin or gulden and the German pfennige.

Finland (Centre quoted: *Helsingfors*).

1 markka (Finnish mark) = 100 penni.

In December, 1925, Finland devalued her monetary unit, the mark, which was instituted on the formation of the State after the War, and established the convertibility into gold of the notes of the Bank of Finland on the basis of 1 new mark = $\cdot 03\frac{15}{19}$ gramme of pure gold, or $\cdot 0421053$ gramme of gold, 900 fine. This gives a mint parity with this country of 193·23 Finnish marks per £1. The gold standard was suspended in October, 1931, and Finnish currency has since depreciated considerably in terms both of sterling and of gold.

France (Centre quoted: *Paris*).

1 franc = 100 centimes.

France was the principal participant in the now defunct Latin Union, and from 1865 to the time of the Great War her currency was based on the gold *franc*, which had a mint parity with the sovereign of 25·2215 francs = £1. In addition the silver 5-franc piece, 900 fine, circulated as legal tender at the fixed rate of $15\frac{1}{2}$ silver francs = 1 gold franc, France thus having a dual or bimetallic standard. When silver was cheap the 5-franc pieces were worth more in all markets as currency than they were worth as silver bullion, and as a consequence the system completely broke down, being consequently described as the *étalon boiteux*, or “limping standard”.

During the Great War vast quantities of inconvertible notes were issued by the Bank of France, and by the Chambers of Commerce in the principal towns, with the result that the currency became very heavily depreciated. The inflation was continued after the War, until in July, 1926, the franc was quoted in the foreign exchange market as high as 250 to the £1, although there was evidence that this rate was considerably below the true value of the currency.

In December, 1926, a new Government undertook the reorganisation of the financial and currency position, and as a result the Paris rate on London was stabilised from March, 1927, to June, 1928, at 124 francs per £1, and, in the latter month, stabilisation *de facto*

became stabilisation *de jure* when the currency was devalued and a gold bullion standard established.

The franc has now a nominal gold content of 65·5 milligrammes, $\frac{9}{10}$ ths fine, or 58·95 milligrammes fine, giving a Mint Par with Great Britain of 124·2134 francs per £1. One hundred-franc gold pieces are to be minted, and are constituted legal tender for any amount, but it is unlikely that these coins will circulate to any extent. Provision was also made for the issue of 5- and 10-franc silver pieces to replace the notes of lower denomination, and also for smaller token coins of aluminium-bronze, nickel and bronze. All gold and silver coins existing before the new currency law are no longer legal tender.

The Bank of France, which has the sole right of note issue, is required to redeem its notes in gold on demand in minimum quantities agreed from time to time between the Minister of Finance and the Bank. The effect is that gold is available for export in quantity, but is not issued for internal use. The Bank is compelled to maintain a gold reserve of not less than 35 % of its liabilities against notes and current accounts, the laws under which it was previously allowed a certain maximum circulation being now repealed. Owing to its policy of sterilisation, the Bank's gold reserve is now much above the legal minimum.

Germany (Centre quoted: *Berlin*).

1 reichsmark = 100 pfennige.

The gold standard was adopted in 1871, and gold coins of 10 and 20 marks were issued, all 900 fine. As a result of the War, however, Germany was compelled to depart from the gold standard, and, in consequence of vast issues of inconvertible paper, her currency became valueless and her exchange purely nominal. The reorganisation of the currency proceeded by two stages. In the first place *rentenmark* notes were issued and made current at the rate of 1 *rentenmark* = 1 billion marks of the pre-war currency. The *rentenmark* is now replaced by the *reichsmark* (= 100 pfennige) of equal value. Notes of various denominations in this new currency have been issued, together with a new coinage of silver and subsidiary metal tokens, all other coins previously issued having been demonetised.

The Mint Regulations provide that one kilogramme of fine gold is to be coined into 139 $\frac{1}{2}$ 20-reichsmark pieces, or into 279 10-reichsmark pieces, all 900 or $\frac{9}{10}$ ths fine.

Following the financial upheaval of 1931, Germany found it neces-

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sary to place close restrictions on exchange operations, and, though the gold bullion standard continues to be maintained in theory, it is practically inoperative.

Greece (Centre quoted: *Athens*).

1 drachma = 100 lepta.

Until 1928 the monetary system of Greece was based on the bimetallic standard adopted by the Latin Union, but in May of that year, after a long period of inflation and depreciation, the currency was stabilised at the ruling rate of 375 per £1, or 51,212·87 drachmae per 1,000 grammes of fine gold.

Greece suspended the gold standard in 1932, and exchange dealings are now subject to considerable restrictions.

Holland (Centre quoted: *Amsterdam*).

1 florin or gulden = (19·82 pence) = 100 cents.

1 florin or gulden = 20 stivers.

Before 1875 the standard was silver, but, owing to the rapid fall in the value of this metal, the coinage of silver was temporarily suspended, and gold coins were put into circulation.

The standard coin is the 10-florin piece, weight 6·720 grammes, 900 fine, containing 6·048 grammes of fine gold. The currency in Holland is, therefore, based on the gold standard, with the silver coins issued before 1875 as limited legal tender.

During the Great War, practically no gold coins were in circulation in Holland, the currency consisting of paper money of various denomination, together with the silver coins and small tokens of nickel and bronze. In consequence of her neutrality during the Great War, however, and her favourable position as a link between Continental countries and the rest of the world, Holland benefited considerably and absorbed more gold than she needed. In 1925 the National Bank sought to re-establish the circulation of gold, but the attempt had to be abandoned because the gold coins soon disappeared.

At the time of writing, Holland continues successfully to maintain the gold bullion standard mainly because her balance of trade keeps firmly in her favour.

Hungary (Centre quoted: *Budapest*).

1 pengő = 100 filler or garas.

On her severance from Austria after the Great War, Hungary found herself with a currency which was severely depreciated in conse-

quence of the excessive issue of inconvertible paper. The paper *corona* was stabilised for some time at the rate of 346,000 per £1, but in November, 1925, a new unit was introduced known as the *pengö*, equal to 12,500 coronas.

Under the terms of the Currency Act, 3,800 pengö are coined from one kilogramme of fine gold, so that the Mint Par with sterling is 27·825 pengö per £1. Gold coins are not in circulation, the metallic currency in use consisting of token coins of silver, nickel and bronze.

The National Bank of Hungary has now the sole right to issue paper currency, and is charged with maintaining the stability of the monetary unit on the basis of a *gold exchange standard*. Thus the Bank must buy and sell such foreign currency as is necessary to keep the exchange within the two theoretical gold points between Hungary and other gold standard countries, and is compelled to buy gold bullion at the mint price of 3,800 pengö per kilogramme of fine gold, less six pengö minting charges, i.e., at 3,794 pengö per kilogramme.

Although a gold exchange standard is nominally operative in Hungary, exchange dealings are now greatly restricted, and, when permitted, can take place only at "official" rates.

Iceland (Centre quoted: *Reykjavik*).

1 krona (pl. *kronur*) = 100 aurar (sing. *eyrir*).

Prior to 1929, Iceland was a member of the Scandinavian Monetary Union, her currency having a mint parity with sterling of 18·159 kronur per £1. During and after the War, the krona was subject to wide fluctuations, but since October, 1925, its value has been maintained at the rate of 22·15 kronur per £1.

Since 1914, Iceland has been off the gold standard, and dealings in foreign exchange are now subject to official control.

Italy (Centre quoted: *Milan*).

1 lira = 100 centesimi.

On the establishment of the Latin Union, Italy based her currency on the *lira*, which, like the Swiss franc and the old French franc, had a parity with British currency of 25·2215 francs per £1. In common with other European countries, Italy entered during the Great War on a period of violent inflation, and excessive issues of inconvertible notes sent down the value of the lira to about $\frac{1}{10}$ th of its pre-war value. After a period of great fluctuation, stabilisation was achieved in December, 1927, and a *gold exchange standard* was adopted based on the

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paper lira. This was devalued on the basis of 7·919053 grammes of fine gold per 100 paper lire, giving a new parity with Great Britain of 92·46 lire per £1 and 19 paper lire per American dollar.

The metallic currency now consists of silver coins of 20, 10 and 5 lire, together with nickel and bronze tokens of lower denomination. The sole right of issuing paper currency is vested in the Banca d'Italia, which is compelled to hold reserves in gold or gold exchange of not less than 40 % of its notes outstanding and sight liabilities, subject, however, to the power to lower the percentage reserve in emergency on payment of a graduated tax.

There are at present no *official* restrictions on exchange operations in Italy, but the authorities, in conjunction with the leading banks, have been able successfully to "peg" the exchange rates and to maintain the gold bullion standard.

Lithuania (Centre quoted: *Kaunas* or *Kovno*).

1 litas (Engl. *lit.*) = 100 cents.

The new monetary unit of Lithuania, termed the *litas*, was made equivalent to $\frac{1}{10}$ th of the pre-1933 U.S. gold dollar, giving it a gold value of ·150462 gramme of pure gold. Coins of silver and nickel are also issued, together with notes of the Bank of Lithuania for various amounts.

No rights exist regarding the convertibility of notes, but the central bank has successfully operated on the market when necessary to maintain the exchanges within close limits of parity with gold currencies.

Poland (Centre quoted: *Warsaw*).

1 zloty = 100 grosz.

The depreciation of the Polish mark by a long course of inflation after the War resulted, in 1924, in the introduction of a new currency unit known as the *zloty*, having a mint parity with the sovereign of 25·2215 per £1, as in the case of the currencies of the old Latin Union. As a result of further mismanagement, however, the currency again collapsed and strenuous efforts became necessary to improve the position. By rigid adherence to sound monetary policy and balanced budgets the currency was stabilised for some time at the rate of 43·38 zlotys per pound sterling. Later, in October, 1927, a gold exchange standard was instituted based on a unit devalued to the rate of 1·67177 milligrammes of fine gold per zloty. This gives a mint parity with this country of 43·38 zlotys per sovereign.

The notes of the Bank of Poland are now the only legal tender

paper currency, and are redeemable on demand either in gold or gold exchange. The total note issue must be backed by a reserve in gold or gold exchange of not less than 40 %, but not less than 30 % must be in actual gold.

After 1927 the zloty was kept stable by the operation of a gold exchange standard, but the restrictions since introduced render the standard practically inoperative and the value of the zloty now depends largely on official control.

Portugal (Centre quoted: *Lisbon*).

1 escudo = 100 centavos. 1 conto = 1,000 escudos.

The circulating currency consists mainly of the inconvertible notes of the Bank of Portugal, together with various smaller tokens of silver, nickel and copper.

One result of the great depreciation of the escudo in recent years—in 1924, its value fell to 155·54 escudos per £1—is that the rate of exchange is now quoted in terms of *escudos to the* £1 instead of pence per escudo, as formerly.

In June, 1931, a decree was published establishing the escudo on a new basis (in effect a sterling exchange standard), and fixing its value at 110 escudos per £1 sterling. English sovereigns and half-sovereigns are legal tender in Portugal.

Rumania (Centre quoted: *Bukarest*).

1 leu = 100 bani.

As in the case of the other participants in the Great War, the economic development of Rumania in post-war years was greatly hindered by the depreciation and continual fluctuation of her currency. For some time progress towards reconstruction was prevented by the short-sighted policy of the Rumanian Government, which placed obstacles in the way of the inflow of foreign capital. On a change of Government this policy was reversed, and arrangements were made—with the assistance of the League of Nations—to raise a reconstruction loan of over £20,000,000 distributed in ten of the principal countries. As part of the scheme of reconstruction, the leu was stabilised in February, 1929, on the new gold value of 10 milligrammes, $\frac{9}{10}$ ths fine, giving a new mint parity with this country of 813·6 lei per £1.

Bank notes were issued in denominations of 100, 500, 1,000 and 5,000 lei, while subsidiary coins composed of an alloy of nickel and copper were struck for amounts of 1, 2, 5, 10 and 20 lei.

The system adopted was the gold exchange standard, and the

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notes of the National Bank of Rumania in amounts of not less than 100,000 lei were made convertible at the Bank's option, into either gold or foreign gold exchange, allowance being made in the latter case for the equivalent of the cost of shipping gold. There are at present extensive restrictions on exchange operations, as a result of which the gold exchange standard is rendered inoperative.

Turkey (Centre quoted: *Constantinople*).

1 piastre = 40 paras.

1 lira or pound (or gold medjidre) = 100 piastres.

Gold coins are $\frac{1}{4}$, $\frac{1}{2}$, 1 lira. Various silver coins were issued, but, although the standard is nominally gold, neither gold nor silver has been coined for some time, and the currency consists chiefly of inconvertible paper. Formerly almost every European nation had its own currency in use, at a certain fixed ratio to the Turkish standard coin. Thus the English sovereign passed at 125 piastres and the French Napoleon at 100, but in consequence of the depreciation of the currency gold is now at a premium and out of circulation, although base silver coins of various currencies are still being used.

In 1928, all the dilapidated paper in use was withdrawn and new notes printed in England were put into circulation.

The currency was stabilised in 1929 at about 110 piastres to the £1 and the Government assumed control of the foreign exchanges.

U.S.S.R. (Centre quoted: *Moscow*).

1 tchervonetz = 10 roubles = 1,000 kopecks.

Prior to the Great War, the currency of Russia was based on the gold rouble of 100 kopecks, the exchange with this country being quoted in terms of roubles per £1. As a result of the War and of the great political and social disorders in the country, the currency has been utterly disorganised and depreciated, various issues having been made by the successive Governments. All such issues are now worthless, and in 1924 the currency was stabilised on a gold basis, the new unit being the *tchervonetz*, equivalent to 10 roubles and theoretically containing 119.4826 grains of pure gold, though no rights of conversion exist. The currency now consists of *tchervonetz* and rouble notes of various denomination, together with silver and copper coins of lower values.

The silver currency tends, however, to disappear from circulation as soon as it is issued, since the masses show an increasing distrust of the paper money, and are at great pains to hoard any silver coins which come into their possession.

The rate is quoted in Moscow in terms of *tehvonetzi* per £1,000 or \$1,000, but rates on Moscow are now quoted in London in *roubles* per £1 (Par: Rbls. 9·458 per £1).

Russia cannot be said to have a free gold market, as the Soviet Government has a monopoly of foreign trade. The exchange has, however, been kept at parity with gold currencies.

Yugo-Slavia (Centre quoted: *Belgrade*).

1 dinar = 100 paras.

This is another of the post-war States, and its new currency was established in 1921 on the basis of the Latin system, at a gold value of 25·2215 dinars = £1. Subsequently, however, the currency became badly depreciated. In 1930 attempts were made to stabilise the exchanges, and, after a period of *de facto* stabilisation, the currency was devalued, and *de jure* stabilisation (at a rate of 11 dinars = 1 gold dinar) was effected in May, 1931. The new parity with sterling (276·32 dinars = £1) was successfully maintained by a form of gold exchange standard, and, on the abandonment of the gold standard by Britain in 1931, the dinar was pegged to the dollar.

As in most other countries, the gold exchange standard is now ineffective owing to the existence of extensive restrictions on exchange dealings.

AFRICA.

Egypt (Centre quoted: *Alexandria*).

The currency system and units are similar to those of the Sudan, which have already been given. Before the War, English, French, German and Turkish gold coins were current at fixed equivalents, the English sovereign passing at 97½ piastres, as in the case of the Sudan. At present, gold coins (including the sovereign) are still accepted at the old fixed equivalents if they are offered, but only Egyptian currency is legal tender, notes of various denominations being issued by the State and by the National Bank of Egypt, against reserves held in London in the form of Treasury bills and similar cover. English notes are accepted, generally at a small discount on the equivalent of 97½ piastres per £1, and this ratio has been maintained since our suspension of the gold standard.

Morocco (Centre quoted: *Fez*).

French zone: 1 franc = 100 centimes.

Spanish zone: 1 peseta = 100 centimes.

1 rial = 20 biliuns.

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Towards the end of 1928, an agreement was concluded between the Banque d'Etat du Maroc (i.e., French Morocco) and the French Treasury, reaffirming the principle of monetary union between the two countries. Under the agreement the Banque d'Etat will buy or sell exchange when necessary with the object of maintaining the Moroccan franc at par with the French franc. The notes of the Banque d'Etat are inconvertible, but silver coins of 10 f. and 20 f. are being issued in the Hinterland, where paper currency is viewed with disfavour.

In Spanish Morocco the legal tender currency consists of Spanish peseta notes and coins, together with silver dollars known as "*hassani*", issued by native Moorish rulers.

AMERICA.

Argentina (Centre quoted: *Buenos Aires*).

44 cents gold = 1 paper peso = 100 centavos.

For many years before the War Argentina suffered from the existence of an inconvertible paper currency, the value of which was frequently depreciated. During the War, the country prospered exceedingly and steps were taken by the Government to improve the currency system. In August, 1927, a gold bullion standard was adopted based on a gold peso having a mint parity of about 47½ pence. The paper currency was made exchangeable into gold for export at the Conversion Office at this rate, but although a gold coin of 5 pesos, known as the *argentino*, is in existence, gold was not issued for internal circulation. Silver, nickel and copper coins are also issued; the silver peso weighs 27·11 grammes, 900 fine.

While exchange quotations are made in terms of the *gold* peso, the currency in actual use is based on the *paper* peso, the value of which in relation to the gold unit is fixed at 44 %, i.e., \$44 gold = \$100 paper.

Argentina again suspended the gold standard in 1929, and exchange dealings were subjected to official control. Since November, 1933, two exchange markets have been recognised. The "Official" market is controlled by the Exchange Control Commission, to whom all bills relating to major exports of Argentine produce must be sold, through banks and authorised dealers. The foreign currency accumulated each day is tendered for on the succeeding day, through banks and other authorised dealers, by applicants holding the Exchange Control permit. The other market is the "free" market, confined to exchange which arises from sources other than major exports and which may

be dealt in without the intervention of the Exchange Control Commission.

In January, 1934, the peso was "pegged" to sterling at the rate of 36d. per gold peso, which is the basic rate at which the Exchange Control Commission will purchase export bills. Rates for other currencies are calculated from their value in sterling.

The letters M/L (*moneda legale*) or M/N (*moneda nacional*) after an amount indicate that it is in *paper pesos*. Gold pesos are indicated by the expression \$ oro, and minted gold by the abbreviation o/s (= *oro sellado*).

Bolivia (Centre quoted: *La Paz*).

1 boliviano = 100 centavos.

Acting on the recommendation of Professor Kemmerer, who has taken a very prominent part in the formulation of schemes for the stabilisation of South American currencies, Bolivia towards the end of 1928 thoroughly reorganised her currency and financial position. The Banco de la Nacion Boliviana was reconstituted as the central bank of issue, and the value of the monetary unit, the *boliviano*, was fixed at .54917 gramme of fine gold, giving a mint parity with sterling of 18d. per boliviano. The gold standard was, however, suspended in 1931, and the central bank has now the monopoly of foreign exchange dealing.

Silver coins, 900 fine, of various denominations, are in circulation, together with nickel coins and the convertible paper notes of the National Bank for 5 bolivianos and upwards.

Brazil (Centre quoted: *Rio de Janeiro*).

1 milreis = 1,000 reis.

Brazil has long suffered from the ill-effects of a depreciated inconvertible currency, and for years her exchange has fluctuated considerably.

An Act of 1927 provided for the stabilisation of the currency on the basis of a new unit, the *cruzeiro* of 100 cents, weighing 800 milligrammes, 900 fine. All existing paper money was to be convertible into the new currency at the rate of 1 *cruzeiro* = 4 paper milreis, and into gold at the rate of .200 milligramme of gold, 900 fine, per *paper milreis*.

The new unit was to be introduced after a date of which six months' notice was to be given, and a Stabilisation Board was formed with agents in London and New York, charged with the task of co-operating

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with the central bank, the Banco do Brazil, to maintain the exchange at the new parity of 5·899 pence per milreis by the purchase and sale of exchange and the receipt of gold at the fixed rate. But, although a successful stabilisation loan was raised and although the exchange was maintained for some time approximately at the new parity, the new currency unit was never instituted. In 1930, the Stabilisation Board was abolished and its functions transferred to the Banco do Brazil.

As a result of the trade depression and Brazil's difficulty in meeting her foreign obligations, the exchange became badly depreciated, and restrictions had to be placed on exchange dealings. Since November, 1933, the exchange has been "pegged" to sterling at about 4d. per milreis.

The method of quoting large sums in Brazilian currency is peculiar, the amounts being always expressed as so many "contos of reis". A "conto" is 1,000,000 reis or 1,000 milreis (1 milreis = 1,000 reis), and is written 1:000 \$000. Thus Rs. 69,304:350 \$500 is equivalent to Rs. 69,304,350,500, or milreis 69,304,350·5.

Chile (Centre quoted: *Valparaiso*).

1 peso = 100 centavos.

The monetary unit is the gold peso, and gold coins of 20, 50 and 100 pesos are coined. The currency long consisted principally of inconvertible paper, but as from January 11, 1926, it was devalued and stabilised on the basis of the 20-peso gold piece of 4·06793 grammes, $\frac{9}{10}$ ths fine, giving a Mint Par with London of 40 pesos = £1.

In 1931, Chile instituted strict control of her exchanges, and, following her suspension of the gold standard in 1932, the official exchange value of the peso was fixed at 3d. (gold). There is also a recognised "barter" exchange market through which exchange resulting from certain exports is used in payment for approved imports. On this market, the quotation is known as the "export" rate which, on 13th March, 1934, was 125 pesos per £1 sight.

Ecuador (Centre quoted: *Guayaquil*).

1 sucre = 100 centavos.

After many years of depreciation the currency of Ecuador was reorganised in 1927, when, on the recommendation of the Kemmerer Commission, the monetary unit was devalued and based on the American dollar at the rate of 5 sucres per dollar. The sucre was given a nominal gold content of ·300933 gramme fine, making the mint parity

with sterling $24\frac{1}{2}$ sucres per £1. The circulating paper currency was made convertible into gold on demand, and a new Central Reserve Bank was established on lines somewhat similar to those of the American Federal Reserve system.

The gold standard was suspended by Ecuador in 1932, and restrictions were placed on exchange dealings.

Mexico (Centre quoted: *Mexico City*).

1 dollar or peso = 100 centavos.

Mexico was for long on a silver standard, the principal coin being the Mexican dollar. After the War, a gold bullion standard was instituted at a parity of 9.76 Mexican dollars per £1, though silver coins continued to be legal tender for any amount. In July, 1931, the currency was reorganised and the silver peso was established on the gold exchange standard, for which purpose it was given an equivalent of 75 centigrammes of pure gold. There is no exchange control, but though somewhat nominal, the exchange is kept near the old gold parity.

Peru (Centre quoted: *Lima*).

£P1 = 10 soles = 1,000 centavos.

The Peruvian pound was originally equivalent to the pound sterling, and the exchange was quoted from Lima at a premium or discount per cent. for 90 days' sterling sight drafts on London. The circulating currency consisted chiefly of notes issued by the Reserve Bank of Peru against re-discount of commercial bills, subject to the maintenance of a statutory reserve of gold.

Peruvian currency depreciated considerably after the War, but was eventually stabilised on a gold bullion standard at a parity of 12.166 soles per £1. The stabilisation scheme did not, however, prove successful, and eventually a new parity of 17.38 soles per £1 was adopted. The gold standard was suspended in 1932, and the sol is now at a discount in terms of sterling.

San Salvador (Centre quoted: *San Salvador*).

1 colon = 100 centavos.

Prior to 1920, the republic of San Salvador had a paper currency issued under a law of 1900, which provided for a minimum reserve of 50 % in gold and silver. In 1920, the Republic finally adopted the gold standard, basing its new currency on the *colon* or *peso* of 100 centavos, containing .836 gramme of gold, 900 fine, giving a par of 9.73 colones per £1, and 2 colones per United States dollar.

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The currency now consists of gold, silver and nickel coins, together with notes of the three native banks of issue, which must maintain a minimum metallic backing of 40 %, and secure the remainder of their issues with securities approved by the Government. In addition to the national currency, the gold and silver coins of the United States are legal currency and pass for all purposes.

The gold standard was suspended in 1931, and, for a time, restrictions were imposed on exchange dealings, but there is now no control.

United States (Centre quoted: *New York*).

1 dollar = 100 cents.

The monetary unit is the gold dollar. Coins of 1, 2½, 5, 10 and 20 dollars are issued, together with various other coins of nickel and silver, and also many forms of Government and bank paper money.

Before March, 1933, when the United States was forced by financial difficulties to place an embargo on gold exports, the gold dollar was legally equivalent to 25·8 grains of gold, 900 fine, giving a Mint Par with the sovereign of \$4·8665 per £1. In February, 1934, the President was given power to vary the gold content of the dollar between 50 and 60 % of its former value, and, up to the time of writing, the gold content has been fixed by proclamation (*but not by law*) at 59·06 % of the old gold content; i.e., the dollar is made equivalent to $15\frac{5}{21}$ grains of gold, 900 fine, giving a Mint Par with the sovereign of \$8·24. With this devaluation, the embargo on gold exports was removed and a gold bullion standard was instituted.

ASIA.

China (Centre quoted: *Shanghai*).

1 candareen = 10 cash or li.

1 mace = 10 candareen.

1 tael = 10 mace.

1 Shanghai dollar = ·715 tael.

These are the moneys of account, but the only coin widely used by the masses is the brass *cash* or *li*, the market value of which is fixed by the people themselves, although silver dollars in great variety are in circulation in various parts of the country. The cash is made of an alloy of copper, iron and tin, and although nominally 1,000 cash = 1 tael (a *weight* of silver), the latter is worth anything from 1,000 to 1,800 cash.

As is explained in Chapter XVIII, the currency position of China has long been one of great confusion, and attempts to improve matters are extremely difficult, largely because of the unsatisfactory political state of the country. In March, 1933, it was decreed that the tael should be replaced for exchange purposes by a new standard silver dollar, weighing 26.6971 grammes and containing 88 % or 23.5 grammes of pure silver. The dollar is exchangeable for the Shanghai tael at the rate of .715 tael per dollar and for the Haikwan tael at 1.558 tael per dollar, but the plan has met with much opposition and the tael is still being widely used for commercial purposes.

French Indo-China (Centre quoted: *Saigon*).

1 piastre = 100 cents.

The currency of French Indo-China was long on a silver basis, but, in 1930, the piastre was made equivalent to 9.09737 grains of fine gold, and is now maintained by means of a gold exchange standard at parity with the franc on the basis of 1 piastre = 10 French francs. The circulating currency consists mainly of notes issued by the Banque de l'Indo Chine.

Japan (Centre quoted: *Kobe*).

1 yen = 100 sen.

1 sen = 10 rin.

From 1871 onwards the legal money was the silver yen of 100 sen, weighing 416 grains troy, 900 fine. This circulated at parity with the Mexican dollar, though the latter had the larger circulation. In 1897 the gold standard was adopted, the gold yen being coined in the proportion of gold to silver of 1 : 16.17, coins of 5, 10 and 20 yen being issued. Notes of various denominations are issued, together with subsidiary coins of silver, nickel and bronze.

Japan was involved in considerable financial difficulty as a result of the Great War and the disastrous earthquake of 1924. The gold standard was eventually restored at the old parity of 2s. 0½d., but was again suspended in December, 1931, and the exchange placed under strict Government control.

Java (Centre quoted: *Batavia*).

1 florin or guilder = 100 cents.

The monetary unit of Java (Netherlands East Indies) is the florin or guilder of 100 cents, of the same value as the Dutch florin, with which the Javanese currency is linked on the gold exchange standard,

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operated between Batavia and Amsterdam. Notes of various denomination, together with coins of gold, silver, nickel and bronze, are in circulation.

Palestine.

£P1 = 1,000 mils.

Prior to 1929 the principal circulating medium of Palestine consisted of Egyptian currency, introduced mainly by British forces operating in that country during the War. This currency was made legal tender in February, 1921, but it had the disadvantage that neither the British Government—the Mandatory Power—nor the Palestine Government had any control over it.

Accordingly, in November, 1927, a new currency was introduced, based on the *Palestine pound*, having the same gold value as the British pound sterling and being divisible for the convenience of the people into relatively small units—1,000 *mils*. Coins are now issued of varying face value in bronze, nickel-bronze and silver, together with Government notes of 500 mils, £P1, £P10, £P50 and £P100. The currency is maintained on the *sterling exchange standard* by arrangements which provide for its exchange pound for pound into and for British currency in London.

EXCHANGES FROM ONE CURRENCY TO ANOTHER.

The calculations involved in making exchanges from one currency to another are quite simple, but short methods should be used wherever possible, as results are usually sufficiently correct to two or three places. Two methods can generally be used: (a) Practice, or (b) Decimals. In many cases, the practice method is quicker and likely to give the more accurate result. If decimals are used, the quantities should always be reduced to the simplest terms either by multiplication or by division by a factor (see Chapter XXIII).

Example 1.—Given £1 = Fcs. 125·10, exchange £126 18s. 9d. into francs.

(a) By practice:—

100	12510
20	2502
7	875·7
	15887·7
1s. 3d. = $\frac{1}{16}$ of £ =	7·819
	<u>15879·881</u>

(b) By decimals:—

126·9375
125·1
12·694
634·687
2538·750
12693·75
<u>15879·881</u>

(c) Short cut:—

$$125 = \frac{1000}{8}$$

$$\therefore \frac{126937 \cdot 5}{8} = 15867 \cdot 1875$$

$$126 \cdot 9375 \times \cdot 10 = \frac{12 \cdot 69375}{15879 \cdot 88125}$$

Answer to two places: Fcs. 15879·88.

Example 2.—Given Fcs. 124·75 = £1, exchange Fcs. 9876·85 to £ s. d.

$$\begin{array}{r} \text{£} \frac{9876 \cdot 85}{124 \cdot 75} = \frac{1975 \cdot 37}{24 \cdot 95} \\ 79 \cdot 173 \\ \hline 2495 \overline{)197537} \\ \underline{22887} \\ 4320 \\ \underline{18250} \\ 785 \end{array}$$

Answer: £79 3s. 6d.

Example 3.—How many rupees would be obtained for £578, exchange at 1s. 6½d. per rupee?

$$\frac{578 \times 240}{18 \cdot 5} = \frac{578 \times 48}{3 \cdot 7} = \frac{27744}{3 \cdot 7}$$

Answer: 7498 rupees 6 annas.

Example 4.—A merchant wishing to cable \$5,000 to New York is offered 3·39 plus cable charges by one bank and 3·38½ all in by another. The cable costs 10s. Which should he accept?

Solution :—

$$\begin{array}{r} (a) \text{ \$5000 at } 3 \cdot 39 = \text{£}1474 \text{ } 18 \text{ } 6 \\ \text{Cable Charge} \qquad \qquad \qquad 10 \text{ } 0 \\ \hline \text{Total cost} \qquad \qquad \qquad = \text{£}1475 \text{ } 8 \text{ } 6 \\ (b) \text{ \$5000 at } 3 \cdot 38\frac{1}{2} = \text{£}1476 \text{ } 0 \text{ } 3 \end{array}$$

The merchant should therefore accept the rate of 3·39.

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Example 5.—Find the value of Rs. 79625 @ 1s. 9½d. per rupee.

Solution:—

If we use decimals, we must multiply 79625 by ·0885416, which is a lengthy process and one which might lead to error unless we take the multiplier (·0885416) to eight places.

By *practice*, the problem is much simplified:—

		£	s.	d.
79625 @ 1s. 0d.	= $\frac{1}{20}$ of £1, ∴ divide by 20	3981	5	0
@ 0s. 6d.	= $\frac{1}{2}$ of 1s.	=	1990	12 6
@ 0s. 3d.	= $\frac{1}{2}$ of 6d.	=	995	6 3
@ 0s. ¼d.	= $\frac{1}{12}$ of 3d.	=	82	18 10
@ 1s. 9½d.		=	<u>£7050</u>	<u>2 7</u>

Answer (to nearest penny): £7050 2s. 7d.

Alternatively the equivalents could be worked as decimals, and the total converted into £ s. d.:—

$$\begin{aligned}
 79625 @ 1s. &= £3981·25 \\
 @ 6d. &= 1990·625 \\
 @ 3d. &= 995·3125 \\
 @ ¼d. &= 82·942708\bar{3} \\
 &= \underline{£7050·130208\bar{3}}
 \end{aligned}$$

Answer: £7050 2s. 7d.

Example 6.—What is the equivalent in yen of £1625 @ 1s. 5 $\frac{5}{32}$ d. per yen?

Solution:—

$$\begin{aligned}
 \frac{1625 \times 240}{17\frac{5}{32}} &= \frac{1625 \times 240 \times 32}{549} \\
 &= \frac{13000 \times 30 \times 32}{549} = \frac{130000 \times 32}{183}
 \end{aligned}$$

Answer: Yen 22732·24.

It is a golden rule that every answer should be checked back, wherever that is practicable. Thus, we can prove the above answer by *practice*, as follows:—

Yen 22732·24 @ 1s.	=	£1136·612
@ 3d.	=	284·153
@ 1½d.	=	142·0765
@ ½d.	=	47·35883
@ ¼d.	=	11·8397
@ 1/32d.	=	2·95993
		1624·99996

Exchange Tables.—In business houses where exchange transactions are frequent, tables of multiples are constructed for converting from one currency into another at various rates of exchange. By this means much time and trouble in calculating are saved, and as in normal times rates of exchange fluctuate only within narrow limits, it is not difficult to construct tables covering all the rates required. From these tables the values in another currency of a given amount of money can be written down without calculation.

(1) *Exchange from Sterling.*—Given £1 = 20·52 marks, construct a table for converting any sum from £ s. d. into marks, and write down the value of (1) £196 10s. 7d. and (2) £27 4s. 0d.

Method.—It will be clear after a little thought that if the values in marks, of 1–9 pounds, shillings and pence are obtained to a sufficient number of places in each case, any sum of £ s. d. can easily be converted.

No.	£	s.	d.
1	20·52	1·026	·0855
2	41·04	2·052	·1710
3	61·56	3·078	·2565
4	82·08	4·104	·3420
5	102·60	5·130	·4275
6	123·12	6·156	·5130
7	143·64	7·182	·5985
8	164·16	8·208	·6840
9	184·68	9·234	·7695

The £ column is obtained by multiplying 20·52 by 1, 2, 3, etc., respectively.

The shillings column is for each value $\frac{1}{20}$ th of the corresponding value for £1, and the pence column is $\frac{1}{12}$ th of the shillings column.

(1) £196 10s. 7d.

£200 =	Mks. 4104
Deduct £3 = 61·56	
9s. = 9·234	
5d. = ·4275	71·2215
£196 10s. 7d. =	Mks. 4032·7785 Answer.

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(2) £27 4s. 0d.

$$\begin{array}{r}
 £20 = 410\cdot4 \\
 £7 = 143\cdot64 \\
 4s. = 4\cdot104 \\
 \hline
 \text{Answer: Mks. } 558\cdot144
 \end{array}$$

If the tables are to be used for large amounts, the value of marks in £ must be given to several places of decimals, and the values in each case likewise extended, but the application of the principle is the same. The example just considered is taken from an examination paper, but it will be evident that it cannot be accurately used for amounts of more than two figures, and even then the values of £ can only be obtained to two places, whereas those for pence can be taken to four.

(2) *Exchange into Sterling*.—The construction of tables for conversion of currency into sterling is usually a simple matter, as only one column of values is necessary, giving the equivalents in decimals of £1 of 1–9 units of the foreign currency. The reason for this is that most foreign currencies are expressed in decimals, but as the £ is a large unit, the values should, in practice, extend to several decimal places.

Two cases arise:—

- (1) *Pence rates*—when quotations are expressed in English money per foreign unit, e.g., Argentina, 1 peso = 47·5783.
- (2) *Currency rates*—when quotations are in foreign money per £1, e.g., Germany, 20·38½ marks = £1.

The method is illustrated by the following table for pesos:

Pesos.	£	Pesos.	£
1	·198243	6	1·189458
2	·396486	7	1·387701
3	·594729	8	1·585944
4	·792972	9	1·784187
5	·991215		

Example: Cost of 8321·45 pesos?

$$\begin{array}{r}
 8000 = 1585\cdot944 \\
 300 = 59\cdot4729 \\
 21 = 4\cdot1631 \\
 \cdot45 = \cdot0892 \\
 \hline
 1649\cdot6692
 \end{array}$$

Answer: £1649 13s. 5d.

A similar table could be constructed for a “pence” rate.

CHAPTER XXVI

THE CHAIN RULE—CALCULATION OF THE MINT PAR AND THE SPECIE POINTS

The Chain Rule.—This is an arithmetical device frequently used in exchange calculations for determining the relationship between two quantities, whose values measured in terms of other fixed related quantities are known or can be found. In the example referred to we were given that $11\frac{1}{2}$ pence = 1 mark, and knowing that 240 pence = £1, we were enabled to determine how many marks were equivalent to a given sum of English money. The principle can be applied to the solution of problems much more involved than this, where a number of related quantities have to be considered before the unknown relationship between two other quantities can be determined.

The method consists in arranging in two columns the quantities whose relationship is known, as in the following example :—

Example 1.

How many francs = £1
if £1 = 20·60 marks,
42 marks = 24 florins
and 100 florins = 1,055 francs ?

This is a simple question arranged with the quantities in two columns, so that the last three equations are statements of known relationships between quantities, and the first equation represents the answer required. It is essential, to arrive at a correct solution by this method, that the first quantity in each equation should be of the same denomination as the last quantity in the preceding equation, and that the last and first quantities should be of the same kind. These quantities of like denomination are said to be “linked”; the answer required is the “missing link” in the chain, and may come first or last, provided the correct sequence is maintained.

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The answer is obtained by dividing the product of the numbers on the right by the product of those on the left, as follows:—

$$\frac{20\cdot60 \times 24 \times 1055}{42 \times 100}$$

Answer: 124·19 francs.

Innumerable examples can be solved by this method, but great care must be taken to arrange the quantities in correct sequence. In practice, the chain is expressed in as short a way as possible *with the question to be solved as the first equation*. Thus the last example would be written as follows:—

$$? \text{ Fcs.} = \text{£1,}$$

$$\text{£1} = 20\cdot60 \text{ mks.,}$$

$$\text{Mks. 42} = 24 \text{ fl.,}$$

$$\text{Fl. 100} = 1,055 \text{ fcs.}$$

Answer: 124·19 francs.

CALCULATION OF THE MINT PARS OF EXCHANGE.

In calculating the Mint Pars of Exchange between the currencies of the principal world centres it is usual to employ the Chain Rule method in order to link up the data obtained from the Mint Regulations of the respective countries. In the examples which follow, the Mint Pars are in most cases calculated correct to the fourth place of decimals. This approximation is sufficiently accurate for most purposes, and is ordinarily used in foreign exchange lists of quotations, but the reader should not overlook the fact that, in certain circumstances, many more places may be required.

Although at the time of writing, the gold standard is suspended in Britain, the gold sovereign remains the basis of our currency system, and the coinage law providing that the sovereign shall contain 123·27447 grains (or 7·98805 grammes) of gold, eleven-twelfths fine, remains unchanged. Hence, any of the following calculations which involve Great Britain are made on this basis, though they are necessarily largely of academic interest so long as we remain off the gold standard.

1. **Switzerland** (and all countries on *Latin Standard*).

First Method.—Simple proportion:—

1 sovereign contains 7·98805 grammes of standard gold.

$$\therefore 1 \quad \quad \quad \quad \quad \quad \quad \frac{7\cdot98805 \times 11}{12} \text{ grammes of pure gold.}$$

$$\begin{aligned}
 &1 \text{ franc contains } \frac{900}{155 \times 20} \text{ grammes of pure gold} \\
 \therefore 1 \text{ sovereign} &= \frac{7 \cdot 98805 \times 11}{12} \div \frac{900}{3100} \text{ francs} \\
 &= \frac{7 \cdot 98805 \times 341}{108} \\
 \text{Mint Par} &= \underline{25 \cdot 2215 \text{ francs per } \pounds 1.}
 \end{aligned}$$

By examining the working here given, the reader will observe that the Mint Par between any two gold currencies can be determined with great ease if the weight of *pure* gold in each of the currency units is known *in terms of the same standards of weight*. All that is then necessary is to *divide the greater weight by the less*, and the answer obtained is the Mint Par of Exchange. Thus:—

$$\begin{aligned}
 &1 \text{ sovereign contains } 7 \cdot 322381 \text{ grammes of } \textit{pure} \text{ gold.} \\
 &1 \text{ Swiss franc contains } \cdot 290323 \text{ grammes of } \textit{pure} \text{ gold.} \\
 \therefore \text{Mint Par} &= \frac{7 \cdot 322381}{\cdot 290323} = 25 \cdot 2215 \text{ francs per } \pounds 1.
 \end{aligned}$$

Second Method.—By Chain Rule :—

$$\begin{aligned}
 &? \text{ Francs} = \pounds 1. \\
 &\pounds 1 = 7 \cdot 98805 \text{ grammes of standard gold.} \\
 &\text{Grammes standard } 12 = 11 \text{ grammes of fine gold.} \\
 &\text{Grammes fine } 900 = 3,100 \text{ francs.} \\
 \text{Mint Par} &= \frac{7 \cdot 98805 \times 11 \times 3100}{900 \times 12}
 \end{aligned}$$

Which is exactly the same result as we obtained above by simple proportion.

$$\therefore \text{Mint Par} = \underline{25 \cdot 2215 \text{ francs} = \pounds 1.}$$

2. United States.

(*Note.*—In February, 1934, the United States dollar was devalued by Presidential decree to 59·06 of its former value. The new gold equivalent of the dollar has not yet been fixed *by law*, however, so in the examples which follow the old gold equivalent is used, viz., 10 gold dollars = 258 grains gold, 900 fine. This does not, of course, make any difference to the *method*.)

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By Chain Rule :—

? Dollars = £1.

£1 = 123·27447 grains of standard gold.

Grains standard 12 = 11 grains fine gold.

Grains fine 9 = 10 grains standard, U.S.A.

Grains standard (U.S.A.) 258 = 10 gold dollars.

$$= \frac{123 \cdot 27447 \times 11 \times 10 \times 10}{12 \times 9 \times 258}$$

Mint Par = 4·8666 dollars per £1.

Usually quoted as \$4·86 $\frac{2}{3}$.

3. Germany.

? Marks = £1.

£1 = 7·98805 grammes standard.

Grammes standard 12 = 11 grammes fine.

Grammes fine 1,000 = 2,790 Reichsmarks.

$$= \frac{7 \cdot 98805 \times 11 \times 2790}{12 \times 1000}$$

Mint Par = 20·429 marks per £1.

4. Holland.

? Florins = £1.

£1 = 7·98805 grammes standard gold.

Grammes standard 12 = 11 grammes fine gold.

Grammes fine 6·048 = 10 florins.

$$= \frac{10 \times 11 \times 7 \cdot 98805}{12 \times 6 \cdot 048} = \frac{878 \cdot 6855}{72 \cdot 576}$$

Mint Par = 12·107 florins per £1.

5. Scandinavia (Norway, Sweden, and Denmark).

? Kroner = £1.

£1 = 7·98805 grammes of standard gold.

Grammes standard 12 = 11 grammes fine.

Grammes fine 1,000 = 2,480 kroner.

$$= \frac{7 \cdot 98805 \times 11 \times 2480}{1000 \times 12}$$

Mint Par = 18·1595 kroner per £1.

6. Belgium.

? Belgas = £1.

£1 = 7·98805 grammes standard.

Grammes standard 12 = 11 grammes fine.

Grammes fine ·209211 = 1 belga.

$$\frac{1 \times 7\cdot98805 \times 11 \times 1}{1 \times 12 \times \cdot209211} \text{ belgas} = \text{£1}$$

Mint Par = 35·00 belgas per £1.

7. Japan.

The Mint Par with Japan, which is quoted in pence per yen, is calculated as follows:—

? Pence = 1 yen,

1 Yen = ·75 gramme fine,

Grammes fine 7·322381 = 240 pence.

Mint Par = 24·5822 pence per yen.

8. France.

? Francs = £1.

£1 = 7·322382 grammes fine.

Grammes fine 900 = 1,000 grammes French standard.

Grammes French standard 6·55 = 100 francs.

$$\frac{7\cdot322382 \times 1000 \times 100}{900 \times 6\cdot55}$$

Mint Par = 124·2134 fcs. per £1.

9. Italy.

? Lire = £1

£1 = 7·322382 grammes fine.

Grammes fine 7·919 = 100 lire.

$$= \frac{7\cdot322382 \times 100}{7\cdot919}$$

Mint Par = 92·466 lire per £1.

Foreign Mint Pars.—It will be useful to indicate here how a Mint Par is determined between two foreign States, e.g., France and Holland. Two methods can be used:—

- (1) Comparison of Mint Regulations as in the above examples.
- (2) Comparison of the two Mint Pars with Great Britain if they are known.

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FIRST METHOD:—

(Note : The Mint Par between France and Holland is quoted in terms of francs per 100 florins or *vice versa*.)

$$\begin{aligned}
 & \text{? Francs} = 100 \text{ florins.} \\
 & \text{Fl. 10} = 6.048 \text{ grammes fine.} \\
 & \text{Grammes fine 900} = 1,000 \text{ grammes French standard.} \\
 & \text{French standard grammes 6.55} = 100 \text{ francs.} \\
 & \qquad \qquad \qquad = \frac{100 \times 1000 \times 6.048 \times 100}{6.55 \times 900 \times 10} \\
 & \text{Mint Par} = \underline{\text{Fcs. 1,025.95 per 100 florins.}}
 \end{aligned}$$

SECOND METHOD:—

$$\text{£1} = 124.21343 \text{ francs} = 12.10710 \text{ florins.}$$

(Note : When this method is applied, the two Mint Pars from which the calculation is to be made must be known accurately to at least five places.)

$$\begin{aligned}
 \therefore 100 \text{ florins} &= \frac{124.21343 \times 100}{12.10710} \text{ francs} \\
 \text{Mint Par} &= \underline{\text{Fcs. 1,025.95 per 100 florins.}}
 \end{aligned}$$

New Mint Parity Between the French Franc and the Dollar.—

Following the decree stabilising the dollar at $15\frac{2}{3}$ grains of gold, nine-tenths fine, the American mints were required to buy imported gold at the rate of \$35 per fine ounce. The Bank of France's official price for gold is Fcs. 16,963,528 per 1,000 kilos fine, or Fcs. 527.625 per fine ounce (see *post*, page 624). Hence, the Mint Par between the franc and the new dollar, as it would be quoted in New York, is:—

$$\begin{aligned}
 & \$ \frac{35.00}{527.625} \times 100 \text{ per 100 francs} \\
 & \text{i.e., } \underline{\$6.63\frac{1}{2} \text{ per 100 francs.}}
 \end{aligned}$$

Alternatively, the parity as quoted by Paris would be:—

$$\text{Fcs. } \frac{527.625}{35.00} = \underline{\text{Fcs. } 15.07\frac{1}{2} \text{ per \$1.}}$$

CALCULATION OF THE SPECIE POINTS.

In view of the considerations and changes which have been discussed in Chapter IV, it will be clear that no gold shipments are

now undertaken from one country to another until careful investigation of the whole position has been made, and the anticipated "outturn" calculated after making allowance for all the expenses, charges and allowances which have to be made at both ends. How necessary this is can be seen from the following summary of the charges made in London and certain other centres at the time of writing on the import and export of gold. A perusal of this summary should enable the reader more easily to understand the specie point calculations which follow at the end of this chapter, but it must be reiterated that the items of cost are in no sense fixed, and it will be seen that, whereas some charges, e.g., the handling charge in London, vary in *direct* proportion to the quantity of gold involved, other charges become relatively lighter as the quantity increases, whilst others again vary according to the fineness of the bullion.

GOLD CHARGES IN THE LEADING CENTRES.

LONDON.

Gold is usually bought and sold in London through the recognised bullion brokers, who charge a commission of $\frac{1}{4}\%$ payable by the seller of the bullion. In addition, the bullion brokers also handle shipments on behalf of clients, for which they make a handling charge of $\frac{1}{4}\%$, or in some cases $\frac{1}{4}$ d. per ounce.

When gold is imported or exported, various other charges are incurred. Thus, in the case of imports, it may be necessary to have the gold refined and assayed, if a recognised Assayer's certificate is not available. Also in the case of exports, it is obvious that allowance must be made for the cost of boxes and packing.

Apart from freight and insurance, the expenses which may be incurred in the case of imports are the following:—

MISCELLANEOUS CHARGES.

Port Rates (London)	1 $\frac{1}{4}$ d. %
Customs entry and clearance	5/- nominal
Cartage (including escort)	£3/10/- per £100,000

MELTING AND REFINING CHARGES (since 1st December, 1931).

Gold coin (sovereigns)	$\frac{1}{4}$ d. per oz.
Bar Gold 995/1,000	$\frac{1}{4}$ d. " "
990/994·9	$\frac{1}{4}$ d. " "
940/989·9	1d. " "
900/939·9	1 $\frac{1}{4}$ d. " "
800/899·9	2d. " "
700/799·9	2 $\frac{1}{4}$ d. " "
Under 700	2 $\frac{1}{4}$ d. " "

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ALLOWANCE FOR SILVER.

Bars from the Far East frequently contain a small proportion of silver for which the refiners make an allowance at the market rate.

ASSAY CHARGES.

900 fine and over	..	..	..	3/-	per bar (say $\frac{1}{10}$ per mille).
Under 900 fine	..	..	..	4/-	„ „

Bars bearing a mint stamp (e.g., Bombay) and Assay Report stamped on them do not require a London assay, as the refiner accepts the mint report.

When bullion is melted the cost of the assay is paid for by the seller. The refiner provides a buyer with the assay free of charge.

Gold obtained from London for delivery to foreign central banks is in bars of about 400 ounces troy of quality *not* below .995 fine, and has to be accompanied by an assay of a recognised English assayer. An exception was made during 1930-31 when, owing to the weakness of sterling, it was necessary to melt large quantities of sovereigns into standard bars for export.

In the case of exports, the following expenses are incurred in addition to cartage, and the customs clearance fee:—

BOXES AND PACKING: 4/- per box (one box contains 4 bars).

INSURANCE RATES.

New York, 1/- % ; Paris, Amsterdam, Brussels, 6d. %.

FREIGHT.

London and New York, 5/6d. %.

London and Paris.

<i>By Air</i>		996 fine.	916 fine.
	Under £5,000	 2/6d. %	2/6d. %
	£5,000 min.	 2/- %	2/- %
	£25,000 min.	 1/6d. %	1/9d. %
	£50,000 min.	 1/3d. %	1/4d. %

By Rail and Steamer.

£25,000 min.	..	..	2/6d. %	2/9d. %
£50,000 min.	..	..	1/9d. %	2/- %
£300,000 min.	..	..	1/1d. %	1/2d. %

(Note.—The freight is based on the value of the gold, so is higher for quantities of gold of the lower fineness, because the bulk of such gold is greater than the bulk of finer gold.)

London and Amsterdam.

By Air.

Under 100 kilos	..	..	2/2d. per kilo gross
Over 100 kilos	..	..	1/9d. „ „ „

By Rail and Sea.

Under 100 kilos	..	..	2/- per kilo gross
Over 100 kilos	..	..	1/9d. „ „ „

London and Brussels.

By Air.

Under 100 kilos	..	..	..	2/-	per kilo
Over 100 kilos	..	..	..	1/9d.	„ „

By Rail and Sea.

Over 100 kilos	..	..	..	1/2d.	per kilo
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NEW YORK.

In President Roosevelt's provisional stabilisation plan of February, 1934, the American mints were authorised to *purchase* imported gold in the form of bars of .889 or finer at the fixed price of \$35.00 per fine ounce, less $\frac{1}{4}$ % Treasury charge and the usual melting and refining charges. The *selling* price was fixed at \$35 per fine ounce, plus $\frac{1}{4}$ % Treasury charge and the usual other charges. These charges in New York at the time of writing are shown below, together with other items which enter into the cost of moving gold to and from the United States:—

INCIDENTAL CHARGES IN NEW YORK.

Brokerage	..	..	..	..	$\frac{1}{4}$ %
Truckage	..	..	..	..	4 c. per \$1,000
Customs declaration, cord and seal	..	..	..	..	\$10.05 nominal

MELTING: \$1 per 1,000 oz. plus 10 c. for each 100 oz. or fraction thereof, computed on weight after melting.

Not charged on non-current U.S. coin and stamped Mint Bars.

Allowance for Loss in weight on Melting.—As melting and refining is done much less carefully in New York than it is in London, an exporter of the metal to the former centre must make an allowance for any loss which may thus be incurred, and it is customary in London to allow $\frac{1}{4}$ % for this purpose.

REFINING CHARGES.

Where deposits of gold bullion contain eight thousandths ($\frac{1}{125}$) or more of silver base, or where the alloy is not suitable for coinage, additional refining charges are imposed by the United States Assay Office, and these charges range from 1 to 8 $\frac{1}{2}$ cents per gross ounce. It is therefore very necessary to see that gold shipped to New York has a copper base content. This is customary in the case of bars refined in Europe but if the gold is bought in the Far East allowance must be made for any additional refining charges which may be incurred in New York because of the presence of too much silver or of an unacceptable alloy in the gold.

INTEREST.

In reckoning interest on gold shipments to the United States, allowance must be made for the fact that, in respect of gold handed to it, the United States Treasury pays for only 97-98 % on the day after arrival, and that the balance is not paid for until the expiration of from three to four weeks.

FRANCE.

The Bank of France is required to redeem its notes on demand *either* in French gold coins *or* in gold bullion at its option. By agreement between the Minister of Finance and the Bank, a minimum can be fixed for the amounts to be redeemed. For the present, the minimum has been fixed at 215,000 francs, which corresponds approximately to the most usual weight of gold bars.

Gold is bought and sold by the Bank of France at a fixed price, but the *buying* price is subject to a reduction for minting and assaying costs. At the time of writing, the maximum charge for minting is Fcs. 40 per kilo, but this may be reduced if it is desired to encourage gold imports. There is no legal minimum as to the amount of gold which the Bank of France may accept and there are no restrictions on the import or export of gold, but various physical hindrances may be put in the way of unduly rapid withdrawals of gold.

The Bank's fixed <i>selling price</i> is.. ..	Fcs. 16,963,528 per 1,000 kilos fine
As 1,000 kilos = 32,150·727 oz. troy,	
this price is equivalent to	Fcs. 527·625 per fine ounce.
The Bank's <i>buying price</i> is	Fcs. 16,963,528 per 1,000 kilos fine
Less Fcs. 40 per kilo standard (i.e.,	
French Standard, ·900 fine)	44,444
Net	Fcs. 16,919,084 per 1,000 kilos fine
	= Fcs. 526·24266 per fine ounce.

In France, gold is accepted for minting only from the Bank of France.

On 14th January, 1931, the Bank of France, which had previously insisted upon receiving gold in "fine" bars (i.e., between 995 and 1,000 fine), agreed to accept gold of British standard fineness, viz., 916½ fine. The Bank will, generally speaking, buy gold of any degree of fineness between 1,000 and 900, the latter being the legal degree of French gold currency, and will, as a matter of customary tolerance, admit a thousandth less.

HOLLAND.

The Netherlands Bank is *not* required by statute to purchase gold offered to it, but, as long as it is able, the Bank will put gold at the disposal of exporters for export to countries which themselves authorise the free export of gold. The export and import of gold are otherwise unrestricted.

The Bank is under no legal obligation to redeem its notes in gold,

and may, at its option, redeem them in other media of payment which are unlimited legal tender, e.g., silver coins.

The Bank's <i>buying price</i> is	Fls. 1,647·500	per kilo fine
<i>Less assay charge</i> (Fl. 3·50 per bar), say ..	Fl. .280	
Net	= Fls. 1,647·220	per kilo fine
Equivalent to Fls. <u>51·2343 per fine ounce.</u>		
The Bank's <i>selling price</i> is	Fls. 1,653·44	per kilo fine
Equivalent to Fls. <u>51·4278 per fine ounce.</u>		

The Dutch Mint is required to coin for private persons unless it is unable to do so on account of pressure of work for the State.

BELGIUM.

The National Bank of Belgium is not required by law to purchase gold offered to it, but by its Internal Regulations, it will buy gold at 4,763·1338 belgas per kilo fine, or 148·150111 belgas per fine ounce.

Bars must weigh about 12½ kilogrammes, and must not be of a lower fineness than 900. Gold bars must be accompanied by the Assay Certificate of a recognised Belgian assayer, though the Bank may accept bars covered by the Certificate of a recognised *foreign* assayer, subject to its right to have part or all of them assayed at its own refineries, whose charge, debited to the seller, is 45 francs per bar. Foreign coins in good condition are accepted at Mint Par rates.

The Bank is required, on demand, to redeem its notes, at its option in (a) gold, or (b) silver at the value in gold (though silver is no longer held in bank reserves); or (c) foreign gold exchange.

The Bank will sell gold at the legal rate of ·209211 gramme fine per belga, i.e., 4,779·8634 belgas per kilogramme fine, or 148·67046 belgas per fine ounce.

In Belgium, the export and import of gold are unrestricted, while the *minting of gold* is free for private persons as well as for the National Bank, but, as no change has been made in the Mint Regulations to give effect to the post-war devaluation, this freedom is entirely theoretical.

SWITZERLAND.

The export and import of gold are unrestricted in Switzerland, but the Swiss National Bank is not required to purchase gold offered to it. The Bank is required to redeem its notes on demand in Swiss

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gold coin, but as long as other banks considered important by the authorities do not redeem *their* notes in gold coin, the Bank has the option to redeem its notes in (a) Swiss gold coin; or (b) gold bullion; or (c) gold exchange on countries possessing a free gold market.

The Federal Mint is required to mint gold for private persons into 20-franc and 10-franc pieces in quantities of not less than 100,000 francs, subject to the sanction of the Department of Finance in every instance. One kilogramme of gold, $\frac{9}{10}$ ths fine, is coined into 3,100 francs, i.e., one kilogramme of *fine* gold is coined into $3,444\frac{4}{9}$ francs. The 10-franc gold piece contains 3·22508 grammes of gold, $\frac{9}{10}$ ths fine, and 1 oz. fine gold is contained in 107·1342 Swiss francs.

Determining the Outturn of a Shipment from London.—We are now in a position to consider the practical calculations made by a bullion arbitrageur *before* he decides to undertake a gold shipment, and also the calculations which he makes in order to ascertain his net profit or “outturn” on a given operation.

In determining the actual outturn of a shipment which has been effected, the bullion dealer will, of course, have before him complete details of (a) the price at which the gold was bought in the exporting centre; (b) all the expenses involved; (c) the rate of interest which must be taken into account; (d) the total time (in days) for which interest must be calculated, i.e., the period from the date of purchase in the exporting centre to the date on which credit is received from the sale of the gold; (e) the price at which the gold is sold in the importing centre; (f) the rate of exchange at which the proceeds of the gold were sold on the Foreign Exchange Market.

The calculation of the allowance for interest calls for particular care. If the arbitrageur recoups himself by selling T.T. on the centre to which the gold is exported, he will incur an overdraft *in that centre* until the arrival of the gold. On the other hand, he may cover by selling a sight draft (in which case there will be little, if any, loss of interest); or, by selling the proceeds *forward*, if it is possible to arrange such a transaction. Finally, he may decide to incur an overdraft (or to use his own funds) *in his own centre* and to defer selling T.T. until the gold reaches its destination.

The following is a statement in respect of a shipment of gold from London to New York in March, 1934, the gold having been purchased in London at 136/10½d. per fine ounce, and sold in New York at the United States Treasury's buying price of \$35 per fine ounce.

CALCULATION OF SPECIE POINTS

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LONDON AND NEW YORK.

PRO FORMA.

Invoice for 230 Bars Gold.

Shipped to New York per s.s. *Olympic*.
87,439·550 oz. @ ·998 fine.

	£	s.	d.
= Oz. Fine 87,264·534 @ 136/10½d. per oz.	597,216	13	1
SHIPPING CHARGES LONDON TO NEW YORK:			
Freight @ 5/6d. % on £597,250 = ...	1,642	8	9
Insurance @ 1/- % on £600,000 (c.i.f. value) = ...	300	0	0
Boxes and Packing (4/- per box) = ...	11	12	0
Bills of Lading and Customs clearance = ...	0	5	0
London Handling charge ¼ %/100	149	5	0
	<u>£599,320</u>	<u>3</u>	<u>10</u>

Interest (on C. and F. value):

*10 days @ 2½ % on £599,000	£410	5	6
*30 days @ 2½ % on £18,000 (3 %/100)	36	19	9

447 5 3
£599,767 9 1

NOTE.—Credit was given by the United States Treasury for only 97 % of the gold on arrival, i.e., in 10 days after leaving London. Credit for the balance of 3 % was given in 30 days.

OUTTURN IN NEW YORK.

87,427·83 oz.* @ ·998 fineness =

87,252·97 oz. fine sold to U.S. Treasury @ \$35 per oz. fine	\$3,053,853·95
Less ¼ % Treasury charge	7,634·65

3,046,219·30

Less Melting charge (\$1 per 1,000 oz. on 87,427·83 oz.)	87·43
--	-------

Net Proceeds from Assay Office	<u>3,046,131·87</u>
--	---------------------

Less :—

Brokerage in New York on net outturn ¼ %/100	\$761·50
Trucking charges (4 c. per \$1,000)	122·15
Customs declaration, cord and seal	10·05

893·70
\$3,045,238·17

*Note loss of weight, viz.:—

Weight before melting	87,439·55
Weight after melting	87,427·83

11·72 oz. = ·0134 %

Result of Transaction.

	£	s.	d.
Sold \$3,045,238·17 @ 5·07½ = ...	600,342	13	4
Bought 87,264·534 oz. Gold at total cost of	599,767	9	1
Profit is therefore	<u>£575</u>	<u>4</u>	<u>3</u>

Equivalent to a further return of about 3 % on original outlay of £599,320, making with the 2½ % interest allowed for in the Invoice, a:—

Total return of 5½ % p.a.

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Rate of Exchange produced by export of Gold from London to New York on the date in question:—

$$= \frac{\$3,045,238}{£599,767} = \underline{\underline{\$5.0773 \text{ per } £1.}}$$

The London "handling charge" taken into account in this statement is the charge made by the bullion brokers who purchase the gold and arrange for its shipment, while the item "brokerage in New York" is the corresponding charge on the other side for collecting the gold and arranging for its disposal. If the gold is being moved at one or both ends by bullion dealers who do *not* have to pay away such commission or brokerage, then, of course, the position is that they can make a slight extra profit on shipments of the metal as compared with banks or other concerns who have to employ the services of bullion brokers. Moreover, it means that firms which can avoid or lessen this or any other item of expense may profitably move gold at a less favourable rate of exchange than their competitors in this business.

Strictly speaking, the export gold point from one country A to another country B at any particular time is the highest rate of exchange, i.e., the most favourable rate to A, at which gold will move, since bankers and others who are in a position to ignore certain expenses will naturally ship gold as soon as they see a prospect of profit in the operation.

Rough Estimate.—Dealers who undertake shipments of the kind here illustrated must, of course, have before them full details of all the costs and charges which have to be incurred in moving gold between the leading world centres, and they have arrangements whereby they are immediately advised of any changes in gold prices, rates or expenses so that they can quickly determine whether or not shipments would be profitable. To this end an estimate of the probable outturn will be made on a percentage basis, which, in the case of the shipment covered by the above account, would appear as follows:—

London market price of fine gold, 136/10½d., i.e., £6.84375.

LONDON CHARGES:

Freight (5/6d. %)	..	..	..	..	..	·275 %
Insurance (1/-)	..	..	..	..	..	·050 %
Handling (½ %/oo)	..	..	..	..	..	·025 %
Boxes (4/- per 1,600 oz.) say	..	..	..	..	..	·002 %
Interest (@ 2½ % p.a.):						
10 days on whole amount	..	..	..	..	..	·068 %
30 days on 3 % of amount	..	..	..	..	..	·006 %
						<u>·426 %</u>

NEW YORK CHARGES:

Brokerage ($\frac{1}{2}$ ‰)	..	..	..	..	..	·025 %
Trucking charges ($\cdot 04$ ‰)	..	..	..	..	..	·004 %
Melting (fine bars), \$1 per 1,000 oz.	..	..	..	..	..	·003 %
Allowance for loss in weight ($\frac{1}{4}$ ‰)	..	..	..	..	..	·025 %
						<u>·057 %</u>
U.S. Treasury charge ($\frac{1}{4}$ ‰)	..	..	..	..	..	·25 %
						<u>·307 %</u>

NEW YORK PRICE ..	..	..	..	..	..	..	..	\$35·00
Less Charges, New York	..	..	..	·307 %				
London ..	..	..	..	·426 %				
						·733 %, say,		·255
Net outturn	..	..	..	..	..	..		<u>\$34·745</u>

$$\text{Required exchange} = \frac{\text{Net outturn}}{\text{London price}} = \frac{34\cdot745}{6\cdot84375} = \underline{5\cdot07689}.$$

Thus, by buying gold in London and selling it in New York, a dealer can obtain the equivalent of \$5·07689 per £1 to his credit in the latter centre, and he can, therefore, make a profit if he can *sell* dollars on the London Market at any rate lower than this, e.g., at 5·07½. At this exchange a shipment to New York would give a small profit, which would be increased if the actual loss in weight in New York was smaller than the dealer's allowance ($\frac{1}{4}$ ‰), as was actually the case in the foregoing example, where the loss was only ·0134%.

In other words, when the price of gold in London is 136s. 10½d., and expenses are those given in the statement, the *export specie point* between London and New York is \$5·07689 per £1, but this figure would naturally vary with any change in the items of expense or other factors in the calculation.

London and Paris.—The following are statements relative to shipments of gold from London to Paris and from Paris to London. It will be seen that the shipment in the first case yields a rate of exchange of 79·61, so that if the francs can be sold in London at any rate lower than this, a profit would be made by the operator. In the other case, the statement is compiled to indicate the lowest price at which gold from Paris can be sold in London to yield a profit with the exchange standing at 77·30 francs per £1.

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LONDON TO PARIS.

Pro Forma. Invoice for 250 Bars Gold.

	£	s.	d.
100,000 fine (= 3,110·3495 kilos) @ 132/-	660,000	0	0
Freight @ 1/1d. %	357	10	0
Insurance (on £675,000) @ 6d. %	168	15	0
London Handling @ $\frac{1}{4}$ %	165	0	0
Paris Commission @ $\frac{1}{4}$ %	165	0	0
Paris Incidentals @ $\frac{1}{10}$ %	33	0	0
Packing (4/- per box)	12	12	0
Bills of Lading and Customs Clearance	10	0	
Interest for two days at 3 % p.a. (on £660,500)	108	11	6
	<u>£661,010</u>	<u>18</u>	<u>6</u>

PARIS OUTTURN.

3,110·3495 kilos @ Fcs. 16,919·084 per kilo Fcs. 52,624,264·46

Equivalent exchange $\frac{52,624,264·46}{661,010·925}$ Fcs. 79·61 per £1.

NOTE.—This calculation is based on the assumption that commission is paid in both centres and that (as is usual) Assay Certificates are provided by recognised London Assayers so that no assay charges are incurred in Paris.

PARIS TO LONDON.

Pro Forma. Invoice for 230 Bars Gold.

Gross weight .. Oz. 87,439·550.

Oz. fine .. 87,264·534 . Kilos fine 2,714·232

@ Francs 16,963·528 per kilo French Fcs. 46,042,952

Plus :—

Paris Commission $\frac{1}{4}$ %	11,511
Freight—Paris to London @ $\frac{7}{100}$ %	32,230
Packing and sundries	1,500
Insurance, Fcs. 48,000,000 @ $\frac{1}{4}$ %	12,000
Total cost	<u>Fcs. 46,100,193</u>
Fcs. 46,100,193 bought @ 77·30	£596,380 5 0
Interest for two days @ 3 % p.a.	98 0 8
London Handling charge, $\frac{1}{4}$ % (on sterling value of gold, £597,132*)	149 5 2
Sterling outlay	<u>£596,627 10 10</u>

Equivalent London price at which gold must be sold to cover cost

and expenses = $\frac{£596,627·54}{87,264·534}$ = 136/9d. per fine ounce.

Actual price realised = 136/10½d.
say, £597,132 0s. 0d.*

Export point, Paris to London = $\frac{46,100,193}{597,132}$ Fcs. 77·202 per £1.

*NOTE.—The above calculation is based upon $\frac{1}{4}$ % commission in both Paris and London. This figure will be less where the transaction is handled by a financial house with a branch in Paris, but, during the rush to withdraw gold from Paris in February, 1934, the combined London-Paris commission was increased for a time to 2 %.

Rough Estimate for Paris.—As in the case of New York, the bullion dealer will keep before him details in reference to the French exchange which will enable him to compute at a moment's notice the conditions in which he can make a profit by shipping gold either to Paris or to London. The following is an approximate statement of the manner in which a bullion dealer will reckon the gold export point from London to Paris:—

		BASED ON LONDON PRICE OF GOLD AT PER OZ. FINE:—		
		130/-	140/-	150/-
SHIPMENT TO PARIS:				
100,000 oz. fine		£650,000·00	£700,000·00	£750,000·00
Plus —				
Freight ..	} say 2.94. %	893·75	962·50	1,031·25
Insurance ..				
Brokerage ..				
Packing ..				
Customs ..				
Cables ..				
Incidentals ..				
2 days' interest at 2½ % p.a.		89·05	95·90	102·75
.. 0137 % ..				
(A)		£650,982·80	£701,058·40	£751,134·00

(Difference for each 1/ in price of gold = £5,007·815.)

1,000 kilos fine at Fcs. 16,963·528	Fcs.
per kilo	16,963,528
Less Bank of France Minting Costs	44,444
Net French Buying Price	16,919,084
100,000 oz.	52,624,266 (B)

(1,000 kilos = 32,150·727 oz. fine.)

	(a. 130/-	(@ 140/-	(@ 150/-
GOLD EXPORT POINT — $\frac{B}{A}$ — Fcs.	80·838	75·064	70·060

Conditions Before 1931.—The foregoing statements may be usefully compared with the following statements of gold movements between New York and London, and Paris and London, during 1929. At that time gold could be purchased and sold in London at the Bank of

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England's price or at rates closely proximating thereto, while gold was being purchased and sold by the United States Treasury at the fixed price of \$20·67183 per fine ounce.

Gold Export Point, London to New York, 1929.

100,000 fine ounces bought from the Market at	£	s.	d.
84/11·4546d.	424,772	15	0
Freight, 3s. on £424,800	637	4	0
Insurance, 9d. % on £429,020*	160	17	6
Interest, 8 days @ 5 %	465	10	6
Boxes and Packing	16	10	0
Brokerage in London, 5s. $\frac{0}{100}$	106	5	0
Commission in New York, 5s. $\frac{0}{100}$	106	5	0
	<u>£426,265</u>	<u>7</u>	<u>0</u>

* Gold value plus 1 %.

100,000 fine ounces sold to the United States Treasury at \$20·67183
= \$2,067,183.

Export point, London to New York = $\frac{2067183}{426265}$
= \$4·8495 per £1.
or \$4·84 $\frac{1}{2}$ per £1.

Gold Export Point, London to Paris, 1929.

32,150·725 oz. fine gold bought in London from the Bank of	£	s.	d.
England at 84/11 $\frac{1}{2}$ d.	136,573	12	0
Carriage at 10 $\frac{1}{2}$ d. per £100	59	15	3
Insurance at 6d. per £100	34	3	0
Packing 20 boxes at 5/-	5	0	0
Interest, two days at 4 $\frac{1}{2}$ %	33	13	6
	<u>£136,706</u>	<u>3</u>	<u>9</u>

1,000 kilos of fine gold sold to the Bank of France at 16,963·50	
per kilo	Fcs. 16,963,500
Minting costs at Fcs. 20 per kilo, 900 fine, say	22,184
Net proceeds	<u>Fcs. 16,941,316</u>

Export specie point, London to Paris = Fcs. $\frac{16,941,316}{136,706·1875}$
= Fcs. 123·92 $\frac{1}{2}$ per £1.

It will be observed that the French minting cost taken into account in this calculation is only Fcs. 20 per kilo, as against the charge of Fcs. 40 per kilo which is operative at the time of writing and which is used in the more recent calculations included above.

PROBLEMS INVOLVING SPECIE POINT CALCULATIONS.

Example 1.—A London dealer purchases 100,000 ounces of fine gold in the London Bullion Market for shipment to New York, at the rate of 84/11 $\frac{1}{2}$ d. per fine ounce. The following charges are incurred in connection with the shipment:

Freight, 3/- % ; insurance, 1/- % ; packing and incidental charges, 1/- %. On arrival in New York seven days after shipment, the gold is sold to the U.S. Treasury at the rate of \$20·67183 per fine ounce. Against the proceeds of the sale of the gold in New York, the dealer sells a sight draft on that centre at a rate of \$4·84½ per £1. Assuming that the sight draft will not be presented for payment until the date when the proceeds are available, find the dealer's profit or loss on the transaction.

Solution :—

Cost of 100,000 ounces of fine gold at 84/11½d.	£
per ounce	= £424,739·5833
Add Freight, Insurance and Packing @ 5/- %	= 1,061·84895
Total Cost	= 425,801·4323
Proceeds of 100,000 ounces at \$20·67183 per fine ounce	= \$2,067,183
The dealer will sell a sight draft for \$2,067,183 at \$4·84½	
Realising £ $\frac{2,067,183}{4·849375}$	= 426,278·232
∴ Dealer's Profit	= £476·8
	= £476 16s. 0d.

Example 2.—Given the following data, calculate the gold export point to New York:—

Bar Gold is obtainable in London at 84/11d. per fine ounce. Freight charges are ½ % ; Interest 10 days at 4½ % p.a. ; Insurance 1/- % on gold value. The gold can be sold in New York at \$20·67183 per fine ounce. (Packing and trucking in London ½ %₀₀.)

Solution :—

Cost of 1 fine oz. of gold in London = £4 4s. 11d.	= £4·24583
Add Charges:—	
Freight ½ %	= ·15
Interest 10 days at 4½ % p.a.	= ·125
Insurance at 1 % ₀₀	= ·05
Packing and Trucking ½ % ₀₀	= ·0125
	·3375
·3375 % of £4·24583	= ·01437
Cost per fine oz. c.i.f. New York	£4·26020
One fine oz. is saleable in New York for	\$20·67183
∴ Gold point, London to New York	$\frac{20·67183}{4·26020}$
	= \$4·85232 or \$4·85½ (approx.).

Example 3.—An exchange operator in New York instructs his agents in London to purchase 100,000 ounces of fine gold at the current market price of 96/7½d. per fine ounce. At the same time he purchases T.T. on London to cover the cost of the gold and the expenses of shipment at the current rate of exchange of \$4·10 per £1. The following charges are incurred in connection with the shipment: Agent's commission, ½ % ; freight, 3/- % ; insurance, 1/- % ; packing and incidental charges, 1/- %. On arrival in New York seven days after the purchase, the gold is sold to the U.S. Treasury at the standard price of

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\$20·67183 per fine ounce. The rate of interest obtainable on banker's funds in New York is 4 %, and is calculated on a 360-day year.

Calculate the profit or loss on the transaction.

Solution :—

Cost of 100,000 ounces of fine gold at 96/7½d.

per ounce	£483,125
Add Freight and other charges @ 5/- %	1,207·812
Agent's commission	361·953
	<u>£484,634·765</u>
£484,634·765 at \$4·10 per £1	\$1,987,002·537
Plus interest for seven days @ 4 % p.a.	1,545·446
∴ Net cost of shipment to American dealer	<u>\$1,988,547·983</u>
Proceeds of gold in New York = 100,000 oz. @ \$20·67183	2,067,183·000
∴ Dealer's profit	<u>\$78,635·017</u>

Say, \$78,635.

Example 4.—(a) If the Bank of France pays Fcs. 16,901·306 per kilogramme of fine gold (31·1035 grammes = 1 ounce), and the franc-sterling rate of exchange is 83½ francs per £1, what is the equivalent price of fine gold per ounce in London, neglecting all expenses?

(b) Using the answer to the foregoing, if the buying price for gold in the United States is fixed at \$33·65 per fine ounce, what is the equivalent rate of exchange between the dollar and the pound?

Solution :—

(a)	? How many £ = 1 ounce fine gold
	If 1 ounce = 31·1035 grs.
	1,000 grs. = Fcs. 16,901·306
	Fcs. 83·125 = £1?
	$31·1035 \times 16,901·306$
	83,125
	= 6·3241
	French parity price = <u>£6 6s. 5½d. per fine ounce.</u>

(b) Equivalent rate of exchange between London and New York is

$$\begin{aligned}
 & \frac{33·65}{6·324} \text{ per £1.} \\
 & = \$5·321 \\
 & = \underline{\underline{\$5·321 \text{ per £1.}}}
 \end{aligned}$$

CHAPTER XXVII

REMITTANCES AND DRAFTS—LONG AND SHORT RATES— “TEL QUEL” RATES

THE actual method by which settlement of a debt for goods is to be effected will in most cases be arranged by the parties at the time the bargain is made. Sometimes it may be tacitly understood that the method to be followed is one which is well known and firmly established in the particular trade concerned, but it is, of course, far better to avoid any possibility of mistake or misunderstanding by having the matter clearly settled in the correspondence or on the order form and acceptance letter.

Settlement by Telegraphic Transfer or Cable.—Probably the simplest method of settling a debt payable abroad is that whereby the debtor requests his banker to instruct the latter's agents in a foreign centre by T.T. or by cable to pay a specified sum to a named person or concern. In such a case, the remitter is usually quoted an “all in” rate by the banker for the facility, or he is quoted a rate exclusive of the cost of the telegram, which may be charged separately. The rate will, in any case, include the bank's profit, but, as we have seen in an earlier chapter, finer rates are quoted according to the amount involved and the importance of the customer.

The calculation of the sterling equivalent of a T.T. or cable merely involves a translation from one currency to the other at the rate to be applied. No interest has to be taken into account, since the foreign currency equivalent is paid out on the other side on the same day as sterling is paid here. (See *valeur compensée*, page 89.)

Nearest Commercial Rate.—A banker who is asked by a customer to buy or to sell a draft or T.T. will base the rate he quotes on the rates at which he can cover his operation in the market. He will add (or deduct as the case may be) any necessary allowances to the relevant market rate, and will quote the *nearest commercial rate in his own favour*. That is to say, if he is *buying* a bill in dollars and works out the rate to \$4·82755, he will apply the next highest commercial rate,

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i.e., $\$4 \cdot 82\frac{49}{64}$, and not the next lowest, i.e., $\$4 \cdot 82\frac{1}{2}$, although the latter is nearer to his calculated decimal. If he were *selling*, he would, of course, apply the lower rate, viz., $\$4 \cdot 82\frac{1}{2}$.

Example 1.—For what amount in sterling would your bank dealer sell a customer a T.T. on New York for \$100,000, if the Market quotes $\$4 \cdot 86\frac{11}{16}$ — $4 \cdot 86\frac{18}{16}$, and the dealer reckons his profit at $\frac{1}{16}$ in the rate?

Solution:—

Dealer can cover a sale of T.T. by buying in the Market at $\$4 \cdot 86\frac{11}{16}$. He will therefore base his rate for quoting to the customer on that rate:—

Dealer's selling price for T.T. is $\$4 \cdot 86\frac{11}{16}$ less $\frac{1}{16}$ ("sell low"),
i.e., $4 \cdot 86\frac{8}{16}$ per £1.

$$\therefore \text{Amount charged to customer} = \pounds \frac{100,000}{4 \cdot 86625}$$

$$= \pounds 20,549 \text{ 14s. 1d.}$$

Example 2.—Calculate the price a dealer would charge a customer for a T.T. on Buenos Ayres for 25,000 pesos, if the dealer is quoted $47\frac{55}{64}$ — $47\frac{57}{64}$ by the Market, and requires a margin for profit of 1 per mille?

Solution:—

If the dealer sells to his customer he must cover by *buying* in the Market, in this case at $47\frac{57}{64}$ pence. He must therefore charge his customer more than this price, i.e., *add* his profit:—

Dealer's selling price for T.T. is	..	..	47·890625 pence.
Plus his profit @ 1 per mille	..	..	·047891
i.e.,	..	..	<u>47·938516</u> ..

He will quote the next highest sixty-fourth:—

$$\begin{array}{r} \cdot 938516 \\ 64 \\ \hline 3 \cdot 754064 \\ 56 \cdot 31096 \\ \hline 60 \cdot 065024 \text{— i.e., 61 sixty-fourths.} \end{array}$$

Say, $47\frac{61}{64}$ pence per peso.

$$\therefore \text{Amount charged to customer} = \pounds 25,000 \times 47\frac{61}{64} \times \frac{1}{240} \times \frac{44}{100}$$

$$= \pounds 2,197 \text{ 17s. 0d.}$$

Important Note.—Although the London Market quotation on Buenos Aires is in pence per *gold* peso, all transfers are in *paper* pesos, whose value is only 44% of that of the gold currency (see page 604).

Settlement by Mail Transfer.—Since payment by telegraphic transfer is the most expensive method of effecting the settlement of a debt, and involves not only a less favourable rate to the remitter, but also expenses for the telegram or cable, parties to a commercial transaction, who wish to settle in less time than would be taken by a long bill, may arrange that payment shall be made through a banker by *mail transfer*.

The rates for mail transfers are *cheaper* than the rates for T.T. and cable, because the bank has to allow the customer interest on the funds involved for the period which must elapse before payment is made in the foreign centre. Thus the rate charged for M/T is calculated from the Market's selling rate for T.T. by making an allowance for the selling banker's profit, and for interest at the rate allowed on banker's funds in the place of payment, since the banker who sells M/T ordinarily covers himself by purchasing T.T. on the same centre, and thus has the use of the funds in that centre until the M/T is presented and paid.

"Guaranteed" Mail Transfers.—The period for which the dealer allows interest in the calculation of the rate for M/T will depend on the distance between the centres, on the time of the next outgoing mail, on the time taken in transit, and on the period which must elapse before the mail is "cleared" in the foreign centre: i.e., the period depends on the total time which must elapse between the date of the receipt of sterling in London and the date on which the dealer's currency account abroad is debited with the payment to the beneficiary.

The dealer works on the best information at his disposal as much for his own protection as for that of his customer, but, in estimating the time of delivery of a foreign mail, the possibility of miscalculation has always to be reckoned with, and either buyer or seller of M/T for large amount may suffer unexpected loss or receive an unexpected profit if the mail is delivered a day or so earlier or later than is anticipated. For this reason, it has become the practice in the London market for dealers to sell *Guaranteed Mail Transfers*, whereby they guarantee to make payment in a foreign centre on a stated date, irrespective of the time of arrival and delivery of the mail, in return for payment of sterling at a fixed rate of exchange. The seller ensures that payment in the foreign centre shall be made on the agreed date

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by advising his agent by cable, sometimes sent at "deferred" (i.e., cheaper) rates, thus obviating the possibility of mail delays.

The advantages of the guaranteed mail transfer are that both seller and buyer know precisely when payment in the foreign centre will be made, and the seller can calculate exactly the "spread", or difference, between his T.T. rate and the rate to be applied to the M/T. It also enables payments to be made in the course of the usual mailing period, though, in fact, no mail is due to leave in the immediate future, and has special advantages in connection with the short-term investment of funds, since the parties can calculate the period involved with absolute certainty.

Example 3.—Calculate what price you will charge for a G.M.T. for \$100,000 on New York, if the Market quotes spot dollars at $4 \cdot 86\frac{49}{64} - \frac{51}{64}$, and you allow interest at 5 % (New York rate) for 10 days, and your profit at $\frac{1}{64}$ th in the rate.

Solution :—

If a G.M.T. is to be *sold*, the dealer will base his selling rate on the rate at which he can cover by *buying* T.T. in the Market, i.e., $4 \cdot 86\frac{49}{64}$ (the Market's selling rate). Therefore:—

Dealer's selling rate for dollars is $4 \cdot 86\frac{49}{64}$, less his	
profit, $\frac{1}{64}$ th, viz., $4 \cdot 86\frac{1}{64}$	$4 \cdot 8675$
Plus interest for 10 days @ 5 %	$\cdot 00676$
	<u>$4 \cdot 8743$</u>
Say, $4 \cdot 87\frac{27}{64}$	

[NOTE the customer is granted an *allowance* in respect of the interest.]

$$\begin{aligned}\text{Sterling equivalent} &= \text{£} \frac{100,000}{4 \cdot 87\frac{27}{64}} = \frac{100,000}{4 \cdot 87421875} \\ &= \underline{\underline{\text{£}20,516 \text{ 2s. 2d.}}}\end{aligned}$$

Settlement by Debtor's Remittance of Sight Draft or Cheque.—

The additional expense of payment through a bank by T.T. or M/T may be avoided if the debtor remits the amount due in the form of a banker's cheque or sight draft payable in the creditor's country and in his currency. The remittance is paid for by the debtor at the short exchange (the rate being usually the same as that for M/T)

and, on being received through the post by the creditor, is encashed by him at the drawee bank.

If the draft thus remitted is in the debtor's currency, the creditor will obtain the equivalent in his own currency from the drawee banker either at the prevailing rate for such drafts, or at a rate determined in accordance with an exchange clause embodied in the instrument. (See *ante*, Chapter VII.)

Calculation of the Short or Cheque Rate.—In some centres, e.g., New York, the majority of rates officially published each day are for cheques or demand drafts, and, wherever such a rate exists for the currency required by a remitter in the form of a draft, business can be effected at that rate. In London, however, most market rates are for T.T., and, unless a cheque rate exists (as, of course, it does in the case of important centres like New York), the dealer must calculate the rate to be applied in the purchase or sale of cheques, short bills and demand drafts by allowing interest off or on the T.T. rate for the time which must elapse between the issue of the cheque or draft, and the date of its presentment for payment to the drawee.

The interest will be calculated, as in the case of M/T, at the rate ruling in the foreign centre in which the cheque or draft is payable, and the time will, of course, vary with the period usually taken by the mail and the date of the next outgoing mail from this side to the centre concerned. Hence, the "spread" between the rate for T.T.'s or cable transfers and the rate for cheques and demand drafts (sometimes called the *cheque margin*) necessarily widens with any increase in the rate of interest ruling in the foreign centre concerned, and with any extension of the time taken by the mail to that centre.

It is important to notice that the banker's rate for *buying* cheques (or M/T) is calculated on a different rate of interest from that used when he is *selling* a cheque. In the latter case he adds to the T.T. rate an allowance for interest at the rate allowed on *his deposit* in the foreign centre; but when asked to *buy* a cheque, he works on the basis that he will have to cover by *selling* a T.T., and so incur an overdraft in the foreign centre: he therefore adds interest at the rate charged for an *overdraft* in the foreign centre. Hence we may say that the banker's cheque margin for *selling* is based on the rate of interest for call money or short deposits, whilst his cheque margin for *buying* is based on the *overdraft* rate.

If the rate for T.T. is in foreign money per £1, the cheque rate, being for a "worse" remittance, will be higher. Hence, if a banker is asked to *sell* a cheque, the allowance for interest must be *added* to

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the Market's selling rate for T.T., while his usual allowance for profit must be *deducted*.

The sight and cheque rates are the same, because a sight draft, like a cheque, is payable on demand. The 8 days' rate on London (quoted by Berlin before the War, and by Paris and other centres nowadays, and known over there as the "Short Rate") allows, of course, for 11 days' interest, which includes the 3 days' grace allowed in England for the payment of the bill or draft.

It may be observed, at this point, that the extending use of air mails for commercial purposes has caused some difficulty to bankers in connection with the issue of sight drafts and cheques, for the reason that, in a number of cases, drafts have been forwarded by air mail and presented for payment to the foreign agent before receipt of the issuing banker's advice, which has been despatched by ordinary mail. Nowadays, therefore, banks charge less favourable rates for drafts which are to be advised and forwarded by air mail, owing to the loss of interest and extra postage involved.

This position may be illustrated by reference to the rates quoted by London on Paris, Amsterdam and Brussels. Between these centres the mailing time is so short that cheques and demand drafts for small amounts are usually sold to customers at the same rate as is charged for T.T.

In the case of large amounts, however, there is generally a spread between the cheque and T.T. rates depending on the relative value of money in the two centres concerned, and the use of the air mail between the centres has led to the curious anomaly of the cheque rate being at times *dearer* than the T.T. rate. To understand how this position arises, we must remember that, in London, T.T.'s on Paris and Amsterdam are normally value *two days* ahead, whereas cheques are paid for in sterling on the *day after dealing*, and, if they are sent by air, can be cashed in Paris on that day, i.e., on the day after purchase in London. Consequently, the spread between the T.T. and cheque rates on these centres for large sums must, in certain circumstances, allow for one day's interest *in favour of the seller* of the cheque. For example, suppose that when day to day money is worth $4\frac{1}{2}\%$ in London and $6\frac{1}{2}\%$ in Paris, a London dealer sells cheque on Paris for Fcs. 250,000. He covers by the purchase of T.T. value two days ahead, but the cheque is presented by air mail and paid on the day after it is sold to the customer. Consequently, the dealer is "out of" francs for one day, costing him $6\frac{1}{2}\%$, while he is "in" sterling for the same period, gaining $4\frac{1}{2}\%$. He must therefore cover himself in

the rate quoted for the cheque in respect of the difference of 2 % interest charged to him in Paris, making the cheque rate to that extent *dearer* than the T.T. rate.

Example 4.—How much will a banker charge for a sight draft on Amsterdam for Fls. 5,254·16, market rates for sight drafts being 12·12--·13, allowing for the bank's profit at 1 per mille.

Solution :—

Market selling rate	..	..	..	12·12
Less bank's profit	..	..	..	<u>·01212</u>
				<u>12·10788</u>

Rate quoted to customer, say, 12·10 $\frac{1}{2}$.

$$\text{Sterling cost of draft} = \text{£} \frac{5,254 \cdot 16}{12 \cdot 1075}$$

$$\therefore \text{£}433 \text{ 19s. 2d.}$$

Example 5.—For what amount would you issue a draft on France against payment of £1,000, the market rates for sight drafts being 124·15--·20, your profit 1 per mille?

Solution :—

Market selling rate for sight drafts	..	124·15
Less bank's profit	..	<u>·12415</u>
		<u>124·02585</u>

Rate quoted to customer, say, Fes. 124·02 $\frac{1}{2}$ per £1.

Amount of draft = Fes. 124,025.

Example 6.—For what amount would you issue a draft on Portugal against payment of £445 12s. 6d., market rates for sight drafts being 110–110 $\frac{1}{2}$, your profit 1 per mille?

Solution :—

Market selling rate for sight draft	..	110·00
Less bank's profit	..	<u>·110</u>
		<u>109·890</u>

Say, 109 $\frac{1}{2}$.

$$\therefore \text{Amount of draft} = \text{£}445 \cdot 625 \times 109 \cdot 75$$

$$= \text{48,907 escudos.}$$

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Example 7.—The Market quotes dollars at $\$4\cdot86\frac{13}{16}-\frac{15}{16}$. What rate would your bank dealer apply on the sale of a cheque on New York, if he allows profit at $\frac{1}{4}$ per mille, and interest at 4 % for 10 days?

Solution:—

Dealer's selling rate for T.T. is	..	..	..	4·868125
Less his profit at $\frac{1}{4}$ per mille	..	..	..	<u>·001218</u>
i.e.,	..	..	..	4·866907
Add interest for 10 days @ 4 %	..	..	..	<u>·00541</u>
Sight rate on New York	..	..	..	<u>4·87232</u>
Rate quoted to customer				<u><u>\$4·87$\frac{7}{32}$</u></u>

Example 8.—Your bank dealer is willing to deal in T.T. Buenos Aires at $47\frac{7}{16}-\frac{1}{2}$, and is asked to sell a cheque on that centre for 100,000 pesos. What rate will he apply if his funds earn 6 % in Buenos Aires, and he allows 15 days for postal transmission?

Solution:—

His selling rate for T.T. is	..	..	..	47·50 pence.
Less interest which he must allow the customer				
for approximately 15 days @ 6 %..	..	..	..	<u>·117</u>
				<u>47·383</u> ..
Say, $47\frac{25}{32}$ d. per gold peso.				

Example 9.—For what amount would you issue a sight draft for Fcs. 20,000 on Paris, the T.T. rate being Fcs. 124·13-·15, your margin 1 per mille?

Solution:—

Market selling rate for T.T.	..	..	Fcs. 124·13
Less margin 1 per mille	..	..	<u>·124</u>
Sight rate	..	..	<u>Fcs. 124·006</u>
Rate quoted to customer =			<u>Fcs. 124 per £1.</u>

$$\begin{aligned}\text{Sterling payment required} &= \text{£} \frac{20,000}{124} \\ &= \text{£}161 \text{ 5s. 10d.}\end{aligned}$$

Example 10.—How much would a London banker give for a sight draft on New York for \$700, when the market rates for T.T. are $\$3\cdot46\frac{13}{16}-\frac{15}{16}$, the interest rate ruling on bankers' funds in London is 3 % per annum, the rate for bankers' deposits in New York is

$2\frac{1}{2}\%$ per annum, and the rate charged on an overdraft by the banker's New York agent is $3\frac{1}{2}\%$ per annum? Allow $\frac{1}{4}\%$ for the banker's profit. Mailing period is ten days.

Solution:—

The banker will cover by selling T.T. in the market at $\$3\cdot46\frac{15}{16}$.

Rate for T.T.	\$3·469375
Add interest @ $3\frac{1}{2}\%$ for 10 days . .	·003373
[New York terms: 360 days]	
Banker's profit, $\frac{1}{4}\%$	·008673
	<u>3·481421</u>

Rate quoted to customer: $\$3\cdot48\frac{1}{2}$ (to nearest eighth above)

$$\$700 @ \$3\cdot48\frac{1}{2} = \pounds \frac{700}{3\cdot4825}$$

$\therefore$ Banker pays $\pounds 201$ 0s. 1d. for the draft.

Settlement by Creditors' Sight Draft.—Very frequently, it is arranged that the initiative in regard to the settlement of a trade debt shall be taken by the creditor, who will draw either at sight or by long bill on the debtor direct, or under a letter of credit on a bank in the debtor's country or on a bank in his own country. The bill so drawn may be expressed in the currency of the creditor's country, or, as is more usual, in the debtor's currency, or, as is frequently the case between countries of relatively less importance, in an international currency such as sterling or the United States dollar.

If the creditor obtains payment by a sight bill in his own currency, he will either turn the draft into cash at once by selling it to a banker for its face value less discount for the mailing period outwards and homewards, or he may hand it to the latter for collection and credit of the proceeds in due course.

If the creditor lives in England, he will probably draw his bill in sterling and insert therein an exchange clause in one of the forms which are customarily used. By so doing he makes certain of obtaining the exact amount due to him, less a small charge for the negotiating banker's commission or profit, and fixes the rate of exchange at which the bill shall be ultimately paid by the foreign drawee. If the bill is drawn "Exchange as per endorsement," the creditor will receive the full sterling amount of his draft; the rate will be specified on the bill by the negotiating banker on this side, the amount of the instru-

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ment will be converted at this rate and the bill will thereafter function as if it were originally drawn in the foreign currency concerned.

If the creditor draws at sight or on demand on his debtor in the latter's currency or in another foreign currency, the amount paid to him in his own currency by the negotiating banker will be determined by a simple conversion at the rate of exchange applicable to the class of remittance to which the draft belongs, the banker seeing that he is covered in the rate for his own profit.

If the draft is sold in a centre which quotes a cheque rate or sight rate in the foreign currency concerned, the conversion will, of course, be effected at that rate. In London, however, the short rate to be applied must first of all be calculated from the T.T. rate, due allowance being made, in the manner already explained, for interest for the estimated period during which the negotiating bank will be out of its funds (calculated at the overdraft rate in the foreign centre) and for the bank's profit, if that is not already covered in the T.T. rate.

Example 11.—How much will a bank in Paris pay for a sight draft on London for £676 17s. 6d., the market rates for cheques being 123·98–124·03? Allow the negotiating bank a profit of 5 c. in the rate.

Solution:—

Market buying rate for sight drafts	..	123·98
Less bank's profit	.. .. .	·05
Rate to be applied	.. .. .	<u>123·93</u>

$$\begin{aligned}\text{Proceeds} &= \text{Fcs. } 676 \cdot 875 \times 123 \cdot 93 \\ &= \text{Fcs. } 83,885 \cdot 11.\end{aligned}$$

Example 12.—What would you give for a demand draft on Milan for lire 97,265, if the market rate is 92–92 $\frac{1}{16}$, your bank's profit $\frac{1}{10}$ of 1 %, the time taken 4 days and interest in Milan 4 %?

Solution:—

Market buying rate for T.T...	.. .. .	92·0625	lire.
Add Profit 1 per mille	.. .. .	·09206	„
Interest, 4 days at 4 %	.. .. .	·04036	„
Banks' buying rate for sight drafts	.. .. .	<u>92·1949</u>	„

Say, 92·20 lire per £1.

$$\begin{aligned}\text{Amount paid for draft} &= \text{£} \frac{97265}{92 \cdot 2} \\ &= \text{£} 1,054 \text{ 18s. 8d.}\end{aligned}$$

Example 13.—What amount in sterling would you give for a bill of exchange on demand drawn on Warsaw for 5,000 *złoty*s, if the rate is 43·20–25, and you allow *Zł.* 3 per *Zł.* 1,000 for stamp duty on demand bills in Poland and $\frac{1}{16}$ % for your collection charges?

Solution: —

Amount of bill	..	..	..	..	<i>Zł.</i> 5,000
Stamps	..	..	..	..	15
					<u><i>Zł.</i> 4,985</u>
Rate for buying	..	..	..	..	<i>Zł.</i> 43·25
Plus $\frac{1}{16}$ %	..	..	..	..	·027
					<u>43·277</u>

Rate applied to the bill, say, *Zł.* 43·28.

$$\begin{aligned}
 \text{Sterling proceeds} &= \frac{\pounds 4,985}{43 \cdot 28} \\
 &= \pounds 115 \cdot 18 \\
 &= \underline{\pounds 115 \text{ 3s. 7d.}}
 \end{aligned}$$

Settlement by Creditor's Long Bill.—The procedure is not quite so simple when the parties agree that settlement shall be effected by a long bill drawn by the creditor on the debtor. In order to illustrate the position, we will assume that a London merchant imports goods from America to the value of £1,000 (including expenses on that side) and that, the short exchange being \$4·865 per £1, the parties arrange that the creditor in New York shall obtain payment by drawing on the British importer at three months *after sight* for the amount due.

Clearly, the creditor who draws a three months' bill for £1,000 on London is faced with two alternative ways of obtaining payment: (a) He may hand the bill to his banker and instruct the latter to present it for acceptance in London, and to collect the proceeds at maturity in due course; (b) He may discount the bill with his banker, thereby obtaining its true present worth (i.e., its face value less discount for three months), and leaving it to the banker to present the bill for acceptance and to collect the proceeds in due course.

Let us assume that the second method is adopted and that the bill is sold to a banker in New York. Now the question arises: What rate of exchange is the negotiating banker to apply to a three months' bill on London if the short exchange is \$4·865 per £1?

If we assume that the banker can cover himself at this rate, he must make allowances thereon which will recompense him (a) for

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being out of his money for three months, i.e., for interest lost until the proceeds of the bill are credited to him on its maturity; (b) for the amount of stamp duty which his London agent will have to pay before he can obtain payment or otherwise deal with the bill on this side; (c) for the risk involved in dealing with an instrument which does not fall due for payment for some time, during which period the position of the parties may change unfavourably, and (d) for his trouble in handling the instrument, presenting it for payment and collecting the proceeds in due course.

To the banker in New York, a three months' bill on London is not as good as a bill involving immediate payment, hence he will expect to buy it at a *cheaper* price in dollars, i.e., at a *lower* rate of exchange. The banker will therefore build up the *long rate of exchange* which he will apply to the bill by *deducting* the various allowances from the short rate. He will first of all deduct discount at the rate *ruling in the place where the bill is payable*, i.e., London, this rate being applied for the reason that, if he should subsequently require to convert the bill into cash before its maturity, he must send it to his London agent for presentment for acceptance and rediscount, whereupon discount will be charged at the rate ruling in London.

In this connection we must bear in mind that, if the parties are first-class financial houses or banks, the rate for first-class bills at the place of payment will be charged, but otherwise the commercial bill rate, which is higher, will be applied.

Secondly, the New York banker will deduct $\frac{1}{2}$ per mille for the English adhesive stamp duty (1s. per £100), and, finally, he will allow about another $\frac{1}{2}$ per mille for charges and contingencies. On this basis, the *long rate of exchange* to be applied to the three months' bill would be calculated somewhat as follows:—

Buying rate for cheques, New York on London ..	\$4·865
Less discount for three months at,	
say, 5 % (London rate) ..	·060813
Allowance for stamps, $\frac{1}{2}$ per	
mille	·002433
Allowance for contingencies,	
$\frac{1}{2}$ per mille	·002433
	·06568
Three months' buying rate	4·79932
Nearest commercial rate:	<u>\$4·79$\frac{15}{16}$</u>

It is assumed in this example that the banker's profit is already included in the short rate, but, if this is not the case, a further $\frac{1}{32}$ to $\frac{1}{16}$ c. in the rate would be deducted by the banker in arriving at the long rate, making the latter about \$4.79 $\frac{7}{8}$. Furthermore, if the long rate were based on the T.T. rate, the allowance for discount would have to be extended to allow for the mailing period. On the other hand, if the long bill were drawn payable three months *after date*, and the long rate were based on the T.T. rate, *no* account would need to be taken of the mailing period, since the bill would be paid exactly three months after its *date*, whereas with a three months' *sight* bill the three months does not begin to run until the bill has been sent abroad and accepted.

Thus, by drawing a three months' bill for £1,000 in place of a sight bill, the creditor realises \$4,799.37 instead of \$4,865 by the latter method. His position is no better if he forwards the bill for collection instead of discounting it, for, in such a case, he will be out of his money during the currency of the bill, and be required to pay the foreign stamp duty and the collecting banker's charges. Obviously, no creditor would be content to accept payment by long bill on this basis unless he were otherwise covered in the price at which the goods were sold. In the majority of contracts for the sale of goods, the price quoted by the seller allows for the fact that the buyer will require three months' credit, and in such cases the creditor is not penalised by drawing at three months' date or sight for the exact amount of his invoice, plus any charges incurred on the buyer's behalf. But if no arrangement exists for the granting of credit, the seller is more likely to arrange with his debtor that he shall draw his three months' bill for an amount in sterling which, on negotiation, will yield approximately the same amount in dollars as he would obtain if a sight draft were drawn for the amount due. In such circumstances he would calculate the amount of his long bill as follows:—

Value of Goods	£1,000	0	0
Add three months' interest @ 5 %	12	10	0
„ Allowance for stamp duty, $\frac{1}{2}$ per mille	10	0	
„ Charges and contingencies, $\frac{1}{2}$ per mille	10	0	
Amount of three months' bill on London	£1,013	10	0

If we assume that the sight rate remains at \$4.865, this bill for £1,013 10s. would be sold at the three months' rate calculated above, viz. \$4.79 $\frac{15}{16}$, and would yield approximately the same amount in

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dollars as the creditor would have obtained if he had drawn for £1,000 at sight and sold at 4·865, i.e.:—

$$£1,013\cdot5 @ 4\cdot79\frac{15}{16} = \underline{\$4,864\cdot17}$$

Calculation of Long Rates from Short Rates.—The long rate of exchange—which is generally understood to mean the *three months'* rate—is calculated from the short rate or T.T. rate by adding, or deducting, as the case may be, allowances for:—

- (a) Interest, for the time which must elapse before payment of the bill, at the *foreign* discount rate for the class of bill concerned.
- (b) *Foreign* stamp duty, usually about $\frac{1}{2}$ per mille.
- (c) Agent's collecting commission or charges, together with a small allowance for risk and contingencies involved in waiting for the money, usually totalling about 1 per mille or $\frac{1}{3}$ %.
- (d) Banker's profit or commission, if this is not already included in the short rate, usually, say, $\frac{1}{3}$ %.

The calculation of the allowances is simple enough. The difficulty lies in ensuring that they are made in the *right direction*, but this difficulty will at once disappear if it is remembered that the long rate is always *cheaper* than the sight rate because it represents money in the future instead of money at once. Hence, if we are operating in this country, we apply to rates in *foreign* money the oft-quoted maxim: "*The better the bill, the lower the rate,*" adding the allowances to the sight rate in foreign currency, and thus making the long rate the higher of the two. On the other hand, we *deduct* the allowances if we are dealing with a rate in sterling, making the sterling price of the long bill lower than the price of a short bill. Thus the charges are always deducted from the short rate in calculating a long rate if the rates are expressed in the "*home*" currency, "*home*" here meaning England, or France, or Japan, or any other centre in which we imagine ourselves to be dealing at the moment.

Bankers' Profit or Commission.—This item requires special care if it is to be allowed for, since it is not always made in the same direction as the other charges. If a dealer is *buying* long bills expressed in a foreign currency and wishes to allow for a profit of, say, $\frac{1}{3}$ %, he must, of course, *add* this to the calculated rate before he effects the conversion into his own currency ("Buy high"). On the other hand, if he is selling a long bill and is working from a short rate in foreign money, he must *deduct* his profit ("Sell low"). The converse is true if the rates are in the dealer's home currency.

Days of Grace.—Allowance for days of grace must be made on bills on any country wherein they are allowed, since it may be taken for granted that the debtor will not usually pay a bill drawn upon him until the last possible moment.

It may be observed that three days' grace are allowed in Canada on bills drawn at sight and after sight, but not on bills payable "on demand". As a rule, bills on the United States take no days of grace, but three days' grace are allowed on *after sight* drafts payable in North Carolina, New Hampshire, Rhode Island and Massachusetts.

"After Date" and "After Sight" Bills.—Great care is also required in applying a long rate to a bill of exchange payable at so many days or months *after sight*, i.e., after it is first seen by the drawee. In the case of a bill payable *after date*, the term begins to run from the date written on the instrument, so that the rate to be applied to such a bill is calculated directly from the T.T. rate, merely by making the requisite allowances, including interest for the unexpired period of the bill. In the case of an *after sight* bill, the term does not begin to run until the *date of sighting*, and, in dealing with such a bill, therefore, the negotiating banker must obviously cover himself in respect of interest lost during the time which must elapse before the bill can be presented for acceptance, i.e., the mailing period. This will vary according to the distance between the centres concerned, according to the date of the next outgoing mail, according as the mail is sent by a fast vessel, or by air, and so on.

Between London and New York, from eight to ten days must be reckoned for transmission, between London and Paris two days,* London and Lisbon three days, and so on. But this additional allowance will be made only if the banker is basing the rate to be applied to a sight bill on *the T.T. rate*, as is the case in London, where practically all quoted rates are for T.T.s. But in other centres, where short or cheque rates are regularly quoted, the allowance for interest lost during transmission will have been already made in the cheque rate or short rate, and, in such circumstances, the long rate for bills *after sight* is invariably calculated with the quoted cheque rate or short rate as the basis, interest being taken into account only for the period of the bill, and the period of transit being ignored.

Example 14.—Cheques on Paris are quoted in London at Fcs. 124·15–·25 per £1, and the commercial bill rate in Paris is $\frac{1}{2}\%$.

* I.e., by ordinary post. *One day only* is allowed if the remittance is forwarded by *air mail*

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Allowing $\frac{1}{2}$ per mille for stamp duty, $\frac{1}{2}$ per mille for risk, and $\frac{1}{2}$ per mille for the negotiating bank's profit, calculate the long rate to be applied by a London dealer in purchasing three months after *sight* trade bills on Paris.

Solution:—

Market buying rate for cheques on Paris ..	Fcs. 124·25
Add 3 months' interest at 4 % per annum	1·2425
French stamp duty, $\frac{1}{2}$ per mille	} ·1242
Allowance for risk, etc., $\frac{1}{2}$ per mille	
Bank's profit, $\frac{1}{2}$ per mille	·0621
	<u>Fcs. 125·6788 per £1</u>
Long rate on Paris = <u>Fcs. 125·68 per £1.</u>	

Example 15.—Market discount rate in London is 7 %, in Berlin 6 %. Assume that a banker is willing to deal in T.T. on Berlin at Mks. 20·53–·56 per £1. Calculate his long rate for purchasing “best paper” on Berlin, payable three months after *date*, allowing 1 per mille for stamp and risk.

Solution:—

T.T. buying rate	Mks. 20·56
Add 3 months' interest at 6 % (Berlin)	·3084
Allowance for risk and stamp duty	·0206
	<u>Mks. 20·889</u>
Long rate = <u>Mks. 20·89 per £1.</u>	

NOTE.—This rate will be applicable only on the date of the bill. If some days of the three months have already run, a slightly *lower* rate would be quoted. (See Examples 39–42.)

Example 16.—A New York banker is willing to deal in cheques on London at $4·85\frac{1}{8} - \frac{5}{16}$ per £1. Discount in New York is 8 %, in London 7 %. Allowing, say, 2 per mille for contingencies and English stamp duty, find the rate he will quote for the purchase of London bills at three months' sight.

Solution:—

As we are operating in New York, rate is in the *home* currency, so deduct charges for the cheaper rate:—

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Buying rate for sight drafts	\$4.85125
Less 3 months' int. at 7 % .. .	.08489
Allowance for stamp, etc. .. .	.00970
	.09459
	\$4.75666

Say, \$4.75²¹₃₂ per £1.

The cheaper bill sells for less dollars per £1.

Example 17.—New York quotes T.T. on London as $4.86\frac{1}{2}-\frac{3}{4}$; interest on overdrafts in London is 4 % and discount on trade bills in London is 5 % per annum. Assuming that the time of mail from New York to London is 10 days, what rate would a New York banker apply on the purchase of (a) a cheque on London; (b) a 60 days' commercial sight draft on London, if he allows his profit at 1 per mille and English stamp duty on long bills at $\frac{1}{2}$ per mille?

Solution:—

Buying rate for T.T. on London	\$4.865
Less 10 days @ 4 %	.00533
Profit at 1 per mille	.004865
	.010195
Buying rate for <i>cheques</i> on London	\$4.854805
	Say, <u>\$4.85¹⁵₃₂.</u>
Deduct 63 days @ 5 %	.041897
Stamps @ $\frac{1}{2}$ per mille	.002427
	.044324
Buying rate for 60 d/s drafts on London	\$4.810481
	Say, <u>\$4.81 per £1.</u>

The more usual method of calculating the 60-day rate is to take the T.T. rate and to deduct therefrom 73 days' interest at the discount rate, *plus* the allowance for stamp duty, viz.,

Buying rate for T.T. on London	\$4.865
Less 73 days' interest @ 5 %	.04865
Stamp duty @ $\frac{1}{2}$ per mille	.002432
Banker's profit @ 1 per mille	.004865
	.055947
	\$4.809053

Buying rate for 60 d/s drafts = $4.80\frac{29}{32}$ per £1.

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The latter method is not, of course, so favourable to the seller if the discount rate is *higher* than the rate charged to the banker for an overdraft.

If the banker is asked to *sell* a demand draft or 60 days' bill on London in sterling, he makes the allowance for interest in the usual way, but he *adds* the amount of his profit (see Example 30).

Example 18.—At what rate would you purchase from a customer a three months' after date bank bill on Milan for lire 150,000 if the market quotation in London for T.T.'s on Milan is 92·15–·20, and market rates of discount are: $5\frac{1}{4}\%$ per annum in London, and 6 % per annum in Milan?

Allow for Italian stamps $\frac{1}{2}$ per mille and for your profit 1 per mille. Neglect English stamps and assume that the bill has exactly three months to run.

Solution:—

Market T.T. rate, London on Milan (buying)	..	92·20	lire.
Add 3 months' interest @ 6 %	.. ..	1·383	
Stamp @ $\frac{1}{2}$ per mille	.. ..	·0461	
Profit @ 1 per mille	.. ..	·0922	
Long Rate	.. ..	<u>93·7213</u>	„
Say, lire <u>93·72$\frac{1}{2}$</u> per £1.			

Example 19.—At what rate of exchange would a London dealer purchase from a customer a draft on New York at 90 d/s, if he is willing to deal in cheques on New York at 4·85–·86, and the discount rate in New York is 5 %. There are no days of grace or stamp duties in New York, and discount is, in practice, calculated on 360 days to the year. Allow 1 per mille for risk, etc.

Solution:—

Buying rate for cheques	.. ..	\$4·86
Add 90 days' interest @ 5 %		
	$\frac{4·86 \times 90 \times 5}{360 \times 100}$	·0608
Risk, etc., 1 per mille	.. ..	·0049
		<u>\$4·9257</u>
Say, <u>\$4·92$\frac{19}{32}$</u> per £1.		

OBSERVE the custom ruling in the United States of calculating interest and discount on the basis of 360 days to the year.

Example 20.—A customer has to draw in U.S.A. dollars at 90 days' sight on a bank in San Francisco, under a Letter of Credit, such draft having to be accompanied by full set of shipping documents. He presents his draft and documents, apparently in good order, to you, and asks you to negotiate the draft. Given the following data, what rate would you quote him?

Market discount rates in London $5\frac{1}{4}\%$; in San Francisco 5% ; U.S.A. stamp duty, negligible; agent's charge for handling documents $\frac{1}{2}$ per mille, bank's profit $\frac{1}{16}\%$; transit from London to San Francisco 14 days; London market quotation for T.T. San Francisco $4.86\frac{1}{2}-\frac{1}{8}$. There are no days of grace.

Solution:—

Buying rate for T.T. on San Francisco	.. ..	\$4.86625
Add Bank's profit @ $\frac{1}{16}\%$	.. ..	.00304
Agent's charges @ $\frac{1}{2}$ per mille	.. ..	.00243
Discount, 104 days @ 5\%	.. ..	.07029
(New York terms: 360 days = 1 year)		
		<u>\$4.94201</u>

$\therefore$ Negotiating rate to be applied is $\$4.94\frac{7}{32}$ per £1.

NOTE.—As this rate is being applied to a transaction with a customer and not with the Market, it is given to the nearest $\frac{1}{32}$ and not to the nearest $\frac{1}{64}$ ($\$4.94\frac{13}{64}$).

Example 21.—On the 22nd November a customer presents to you for discount a bill for Fcs. 125,000, payable in Paris and due on the 1st January following. If the T.T. rate on Paris is quoted in the London Market as $124.15-25$, at what rate would you discount the bill, allowing $\frac{1}{16}\%$ as your profit, and with how much sterling would you credit the customer's account for the proceeds? Paris discount rate $4\frac{1}{2}\%$. There are no days of grace in Paris.

Solution:—

Market buying rate for T.T.	.. ..	Fcs. 124.25
Dealer's profit @ $\frac{1}{16}\%$	.. ..	.07766
Dealer's buying rate for T.T.		<u>124.32766</u>
Add allowance for interest, viz., 40 days @ $4\frac{1}{2}\%$		.61312
		<u>Fcs. 124.94078</u>

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∴ Rate to be applied = say, Fcs. 124·94 per £1.

∴ Sterling equivalent = $\pounds \frac{125,000}{124 \cdot 94} = \underline{\underline{\pounds 1,000 \text{ 9s. 7d.}}}$

To Find Long Rates at Two Centres.—A useful arithmetical exercise is to calculate the long rates in two centres when rates in each are given. Great care has to be taken to see that the correct discount rate is used, and also to allow the charges in the right direction.

Example 22.

London on Paris T.T. buying rate is Fcs. 124·25.

Paris on London T.T. buying rate is Fcs. 124·20.

Discount rate for trade bills in Paris is 5 %, in London 4 %.

Allowance for risk $1\frac{1}{2}$ per mille, stamp $\frac{1}{2}$ per mille.

Find banks' buying rates in both centres for trade bills payable three months after date.

Solution:—

London on Paris T.T. rate	Fcs. 124·25
Add 3 months' int. at 5 % (Paris)	1·5531
Allowance for risk and stamp at 2 per mille	·2485
	<u>Fcs. 126·0516</u>

Long rate on Paris = Fcs. 126·06 per £1.

Paris on London T.T. rate	Fcs. 124·20
Deduct 3 months' int. at 4 % (London) 1·2420	
Allowance for stamp and risk, 2 per mille	·2484
	<u>1·4904</u>
	<u>Fcs. 122·7096</u>

Banks' long rate on London = Fcs. 122·70 per £1.

We add charges in London, but deduct them in Paris, because, in London, Fcs. 126·06 are cheaper to buy per £1 than Fcs. 124·25, whereas in Paris it is cheaper to give Fcs. 122·70 per £1 than to give Fcs. 124·20.

Also:—

We add charges in London, because

More francs should be received in three months' time than if they were received now; and

We deduct them in Paris, because

Less francs will be paid to-day for sterling due in three months' time than if it were due to-day.

Example 23.

London on Rio, T.T. buying rate is $5\frac{1}{2}$ pence per milreis.

Rio on London, " " " $5\frac{13}{16}$ " " "

Discount rates for trade bills, London 6 %, Rio 8 %.

Allowance for risk and stamp, say, $\frac{1}{64}$ d. in the rate.

Find long rates for trade bills payable 3 months after date.

Solution:—

London on Rio, T.T. buying rate	5.75
Deduct 3 months' interest at 8 %	.1150
Allowance for risk and stamp	.0156
	1.306
	5.6194

London buying rate for long bills = $5\frac{39}{64}$ pence per milreis.

Rio on London, T.T. rate	5.8125
Add 3 months' interest at 6 %	.0872
Allowance for stamp and risk	.0156
	5.9153

Buying rate for long bills on London = $5\frac{29}{32}$ pence per milreis.

Note carefully that when rates are quoted in *the same way* in both places, then if we add charges in one place we must deduct them in the other. If, however, the rates are quoted in different ways, i.e., one in sterling and the other in currency, we add or deduct, as the case may be, in *both cases*. None of these calculations should cause any difficulty if it is clearly understood that, in whichever place we may be dealing, that rate of exchange is dearer which compels us to give more of the home currency, or the currency of the place in which we consider ourselves to be, for each unit of foreign currency which we buy.

Short Rates from Long Rates.—Although of little practical utility, another useful theoretical exercise is to reverse the process illustrated above, and calculate the short rate if the long rate is given. This simply involves an application of the foregoing principles in the reverse order, that is to say, wherever charges are added in the above examples, they must now be deducted, and so on.

Example 24.—Assume that a bank in Buenos Aires is willing to buy long bills on London (best paper) at $47\frac{1}{2}$ pence per peso, and that market discount in London is 8 %. Find the rate likely to be quoted

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by the same bank for buying cheques on London, giving the seller an allowance of 1 per mille for the smaller risk, etc.

Solution:—

Long rate on London	.. .. .	47·75 pence.
Deduct 3 months' int. at 8 %	.. .. .	·955
Allowance, 1 per mille	.. .. .	·048
	—	1·003
		<u>46·747</u> ..

Short rate = 46 $\frac{3}{4}$ pence per gold peso.

Settlement by Debtor's Long Bill.—Although the practice is becoming increasingly less common, remittances from certain countries (especially the Dominions) are made by means of *long bills* (almost invariably bankers' drafts) payable in the creditor's country and currency. The amount of such a bill is determined by precisely the same considerations as we have discussed in relation to long bills drawn by the creditor. If the creditor has agreed to accept payment by long bill, and to wait for his money until the bill matures, the debtor has merely to purchase from his banker a draft of the required term and amount, paying for it at the long rate of exchange applicable to the class of remittance concerned. If, on the other hand, the debt due to the creditor is payable *immediately*, the face value of the long bill or long bills remitted by the debtor must be sufficient to cover the amount owing, as well as the amount of discount and other charges incurred by the creditor on the conversion of the bills into cash. This will be clear on considering the following illustration:—

A London merchant owes a French creditor a debt of Fcs. 124,000 payable *immediately*. The short rate of exchange is 124, and consequently a sight bill for the requisite amount would cost £1,000. If, however, long bills are sent, the total amount in francs must be such that the French creditor can obtain Fcs. 124,000 by immediately discounting the bills and paying any necessary charges. As the long rate on France is *higher* than the short rate by the amount of the allowance for interest and charges, it is clear that £1,000 invested in bills at the long rate should yield the creditor approximately the same as £1,000 invested in a sight draft.

For example, with a short rate of 124 the long rate might be 125·5, in which case £1,000 would purchase Fcs. 125,500, Fcs. 1,500 more than could be obtained by the short rate for the same amount in sterling. This additional amount of Fcs. 1,500 would just about cover the cost to the creditor of discounting, stamp duty and other charges.

With this explanation the following illustrative examples should be clear to the reader. Banker's profit is charged as in the case of sight drafts, but considerable care must be exercised in making allowances for stamp duties. Where a banker in London is asked to *sell* a long bill he must recoup himself for the cost of stamping the bill; hence, he will add the amount of stamp duty to the sterling amount to be charged for the draft. The cost of *foreign* stamps will in each case be ignored, since it falls on the customer's shoulders.

Example 25.—Buenos Aires quotes London short at $47\frac{1}{2}$ – $47\frac{3}{4}$ pence per peso. Market discount rates, London 8 %, Buenos Aires $7\frac{1}{2}$ %. Allowing $\frac{1}{2}$ per mille for Argentine stamp duty, $\frac{1}{8}$ % for the selling bank's profit, calculate the rate at which a bank in Buenos Aires will be willing to sell three months' *sight* bills on London.

Solution:—

Selling rate for cheques on London	47·5d.
Add Interest for 3 months at 8 %	
(Market rate)	·95
	48·45
Deduct bank's profit at $\frac{1}{8}$ %	·06
Argentine stamp, $\frac{1}{2}$ per mille	·02375
	·08375
	48·36625

Long rate : say, $48\frac{1}{4}$ pence per gold peso.

Example 26.—Assume that a London banker is willing to deal in T.T. on Monte Video at $49\frac{3}{4}$ – $\frac{7}{8}$ pence per peso, that bank discount in London is 5 %, in Monte Video 4 %. Allowing 1 per mille for stamp and risk, find the rate he will apply to the purchase of commercial bills on Monte Video payable three months after *date*.

Solution:—

Buying rate for T.T. on Monte Video	49·75
Less 3 months' interest at 4 %	·4975
Allowance for stamp and risk,	
1 per mille	·0497
	·547
	49·203

Long rate on Monte Video = $49\frac{13}{64}$ pence per gold peso.

The long rate is cheaper, i.e., fewer pence are paid per peso.

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It will be noticed that the allowances for stamp duty in this and the last example are made in each case *in favour* of the banker, despite the fact that in the one case he is buying, whereas in the other case he is selling. As a general rule it will be found that, wherever an allowance for stamp duty has to be made in one of these calculations, it is made *in favour of the bank*.

Thus, in Example 25, the banker in Buenos Aires is drawing a bill on London for the convenience of his customer, and he will naturally charge the customer with the stamp duty which has to be paid. Accordingly, he has charged this expense in his rate, though in practice he would be more likely to exclude this item from the calculation of his rate, and to add the actual cost of stamps to the price of the bill. His customer will have to bear the English stamp duty when he presents the bill in London, but the Argentine banker cannot grant an allowance for this expense, for to do so would mean cutting into his narrow profit margin.

In Example 26 the London banker charges his customer for the foreign stamp duty which he has to pay on the bill when it reaches Monte Video, but, as explained in the last paragraph, he makes his customer no allowance for the *English* stamp duty already borne by the latter.

It will be noticed also that when a banker is *selling* a long bill he makes no allowance to the buyer for risk or other charges; these items appear only in the calculation of a bank's *buying* rate.

Example 27.—I owe Fcs. 30,000, to be paid in three months in Paris. What is the cost of a three months' draft for payment of that amount if market T.T. rates are Fcs. 125·15–25, discount in Paris is 5 %, and my bank's profit 1 per mille?

Solution:—

Market T.T. rate (selling)	Fcs. 125·15
Less bank's profit, 1 per mille	·125
	125·025
Add 3 months' int. @ 5 %	1·563
	Fcs. 126·588
Rate charged by bank	Fcs. 126·58
	£ s. d.
Fcs. 30,000 @ 126·58	237 0 1
Add stamps	0 3 0
Total cost of draft	£237 3 1

Example 28.—What would a New York banker charge for a 60 days' sight draft on London for £1,000, if the T.T. rates in London are $\$4.86\frac{1}{2}-\frac{1}{2}$ and discount rate in London is 5 % per annum? Allow $\frac{1}{4}$ c. in the rate for banker's profit but ignore American stamp duty. Mailing period is 10 days.

Solution:—

Market selling rate for T.T.	.. .. .	\$4.8675
Add profit	.. .. .	.0025
		<u>4.87</u>
Less 73 days' interest @ 5 %	.. .. .	.048675
		<u>\$4.821325</u>
Rate quoted to customer	..	<u>\$4.82$\frac{1}{2}$</u>
Charge for £1,000 draft	..	\$1,000 $\times$ 4.82 $\frac{1}{2}$
		<u>\$4,822.50.</u>

Example 29.

(a) A New York banker quotes the following buying rates on London:—

Cable, 3.51 $\frac{1}{2}$. 60 days, 3.50 $\frac{1}{2}$.

If the difference in rates represents English stamp duty and interest only, at what rate (to nearest $\frac{1}{16}$ %) has the American banker calculated interest in arriving at his buying rate for 60 days' drafts? Mailing period, 10 days.

(b) In the above example, assume that the London discount rate moves to 1 $\frac{1}{4}$ % and adjust the 60-day rate accordingly.

Solution:—

(a) The cable rate is	.. .. .	3.5125
Deduct stamp duty at $\frac{1}{2}$ per mille	.. .. .	.00175
		<u>3.51075</u>
Deduct 60 days' rate	.. .. .	3.505
Balance represents interest	.. .. .	<u>.00575</u>

The 60 days' rate is based on:—

60 days' usance
 3 days' grace
 10 days' mailing time
73 days

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∴ If on \$3·5125 for 73 days interest is \$·00575

$$\begin{array}{r} \text{on } \$100 \quad ,, \quad 365 \quad ,, \quad ,, \quad ,, \quad \$\cdot00575 \times 100 \times 365 \\ \hline 3\cdot5125 \quad \times \quad 73 \\ \hline = \cdot8185 \end{array}$$

$$\text{Rate of interest} = \frac{13}{16} \% \text{ (to nearest } \frac{1}{16} \% \text{).}$$

(b) The cable rate is	3·5125
Deduct stamps at $\frac{1}{2}$ per mille	·001756
Int. at $1\frac{1}{4}$ % per annum	·008781
	·010537
	3·501963

$$60 \text{ days' rate} = \$3\cdot50\frac{3}{16} \text{ per } \text{£}1.$$

NOTE.—This calculation is based on a 365-day year, i.e., the banker works the interest on “London terms,” since the bill is payable in London. In the United States interest or discount *charged* is worked on the basis of a 360-day year, but is *added* on the basis of 365 days.

Purchase of Long Bills for Varying Terms.—When rates for long bills are published, they apply to bills having certain fixed periods to run, viz., three months, 90 days, 60 days, and so on. A little consideration will make it clear that the unexpired period of many long bills which are brought to a banker for sale or negotiation will not correspond with the period for which the rates are available. Many bills will have already run some part of the term for which they are drawn, whereas others will be drawn for longer periods than those to which the quoted rates apply.

In those centres which make a practice of quoting long rates, the quotations will apply only to the most common type of bill which the bankers have to handle, e.g., 60 days in New York, and as it would be almost impossible to quote prices to cover the varying periods of all the bills dealt with, adjustments have to be made at the time of sale to compensate for the interest gained or lost, as the case may be.

There are two possible methods of dealing with the necessary allowance:—

- (a) In practice, the *price* at which the bill is sold, that is, the rate of exchange per unit, is increased or decreased by the amount of interest to be allowed.
- (b) Another possible method, now seldom if ever applied in practice, is to calculate the value of the bill at the quoted rate available,

whether that is a short rate or a long rate, and to make a separate adjustment for the interest on the amount so calculated.

In the latter case we adjust the *principal*, but retain the same price, whereas in the former case we adjust the *price* and keep the principal the same.

“**Tel Quel**” Rates.—A rate of exchange adjusted by the *first* method is known as a *tel quel* rate, or an “all in” rate, because it is made to fit the bill “such as it is”, and must be clearly distinguished from the adjustment of the principal made by the *second* method. The latter is *not* an example of a *tel quel* rate, since no special rate is calculated.

As in the case of the calculation of long and short rates, the *tel quel* rates should, where possible, be calculated to the nearest “step” by which the exchange varies, e.g., to the nearest $\frac{1}{2}$ centime for France, $\frac{1}{64}$ cent for U.S.A., etc., though, in practice, most of the bills will be for small amounts, so the nearest $\frac{1}{8}$ fe. or $\frac{1}{4}$ c. would be used. It is impossible, however, to lay down hard and fast rules in this respect. Great care must also be taken to ensure that the correct discount rate is used, i.e., the rate ruling in the centre where the bill is *payable*.

In those centres on which no long rates at all are published, rates must be specially calculated by the negotiating banker to cover each different type of bill with which he has to deal, and all such rates may, of course, be properly regarded as *tel quel* rates, whether they are three months’ rates or not.

As in the calculation of long rates, it is essential in fixing *tel quel* rates for bills payable *after sight*, to make due allowance for any time lost in transmission to the place of payment, and also for days of grace, if any, since, during any such period, the purchaser will be out of his money. Consequently in applying a *tel quel* rate to a 60 days’ sight bill on New York, a London banker would include interest for 8 or 10 days, i.e., the time required for transmission by mail and presentment for acceptance.

Remember also that a two months’ bill is better than a three, four, or five months’ bill, and that a four months’ bill is not as good as a bill due in three months, because the nearer the date on which the money can be obtained, the more valuable the bill is to the holder. In fact, so strong is the preference for a quick turnover, that three months’ bills are discountable at easier rates than bills for longer periods; i.e., the latter are *relatively* cheaper to buy and

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less remunerative to discount or to sell, for the seller allows the buyer interest at a rate slightly higher than the foreign bank rate.

In brief, the longer the term of the bill, the higher the rate of discount. So in calculating a *tel quel* rate for a bill having a longer term than the usual usance, it is best to work from the short rate than from the long rate, where both are quoted. Assume, for example, that we require the rate for five months' bills and know that the discount rates in the relative foreign centre are as follows:—

1 month	1 %	4 months	2 %
2 months	1½ %	5 „	2½ %
3 „	1½ %	6 „	3 %

Clearly, it is better in such circumstances to add to the cheque rate interest for five months (*at* 2½ %, i.e., at the rate appropriate to the particular class of paper, rather than to add two months' interest @ 2½ % to the three months' rate. The latter method would not be strictly accurate, for the three months' rate involves interest at 1½ % only, so, by using that rate, the full allowance for interest would not be made in the case of the five months' bills.

Example 30.—Foreign Rate.—Find the *tel quel* rate for buying a two months' bank bill on Paris: London on Paris cheque rate 124·20-·25, your profit ⅛ %, other allowances 1 per mille. Market rate in Paris, 8 %.

Solution:—

Short rate (buying)	..	..	..	Fcs. 124·25
Add two months @ 8 %	..	..	..	1·657
Allowances, 1 per mille	..	..	..	·124
Profit, ⅛ %	..	..	..	·155
Two months <i>tel quel</i>	..	..	..	Fcs. <u>126·186</u> per £1.

Say, Fcs. 126·19 per £1.

The two months' rate is cheaper, i.e., higher, than the cheque rate, so we *add* allowances.

Example 31.—Rate in “Home” Currency.—Find the *tel quel* rate at which a Swiss banker will buy a five months' trade bill on London in Berne, if the bank's rate for three months' bills is Fcs. 25·45-·55 per £1. Bank rate in London 5½ %; market discount 5¼ %.

Solution:—

The bank's buying rate for trade bills is 25·45—the cheaper rate in Switzerland (less of their units per £1). The discount in London for trade bills will be at the Bank rate of $5\frac{1}{2}\%$.

Three months' buying rate on London	..	Fcs. 25·45
Less two months @ $5\frac{1}{2}\%$ per annum	..	·233
		<u>Fcs. 25·217</u>

$\therefore$ Five months' *tel quel* = Fcs. 25·21 $\frac{1}{2}$ per £1.

The five months' bill is cheaper than a three months' bill, so that it costs *less* francs in Switzerland. Allowances for stamps, etc., are already included in the three months' rate.

Example 32. Foreign Rate.—A bank in Buenos Aires quotes London 90 days at 47 $\frac{3}{4}$ -48 pence per peso. Find the rate it will apply to the purchase of a five months' bank bill on England. Bank rate in London $5\frac{1}{2}\%$, market rate being $5\frac{1}{2}\%$.

Solution:—

Three months' buying rate	..	48	pence per peso.
Add two months' (or 60 days) @ $5\frac{1}{2}\%$		·42	
		<u>48·42</u>	

Rate applied, say, 48 $\frac{1}{2}$ pence per gold peso.

The bill is “worse” than a three months' bill, so that the peso purchases more pence.

Example 33. “Home Currency.”—Find the rate quoted by a Paris bank for the purchase of a four months' bill on London if its 3 months' buying rate on London is 125·35. Discount in London 5% .

Solution:—

Three months, Paris on London	..	Fcs. 125·35
Less 1 month @ 5%	..	·5223
		<u>Fcs. 124·8277</u>

Four months' *tel quel* = Fcs. 124·82 $\frac{3}{4}$ per £1.

The longer bill is worth *fewer* francs per £1.

Second Method—Adjust Principal.—Another theoretical method of calculating the value of a bill when there is no long rate applicable is that of adjusting the *principal*; the present worth of the bill in terms

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of the currency in which it is drawn is calculated and converted at the short rate. As we have stated, a banker in practice will always adjust his *rate* for the purchase of a bill whose term differs from that usually quoted, but the method of adjusting the principal forms a useful theoretical exercise, as is illustrated in the following examples:—

Example 34.—The Market quotes bank cheques on Paris at 124·20–25. Market discount in Paris is 6 %, your bank's profit is 15 c. in the rate, allowances on long bills, say, 1 per mille. What would you give for a three months' bill on Paris for Fcs. 12,922, due in one month?

Solution:—

(a) ADJUSTING PRINCIPAL:—

Amount of bill	.. .. .	Fcs.	12,922
Less 1 month's interest @ 6 %	.. .. .	64·61	
Allowances @ 1 per mille	.. .. .	12·92	
			77·53
Present worth	.. .. .	<u>12,844·47</u>	
Market buying rate for cheques	.. .. .	Fcs. 124·25	
Add profit	.. .. .	·15	
Bank's buying rate for cheques	.. .. .	<u>Fcs. 124·40</u>	
Value of bill for Fcs. 12,922	= £	$\frac{12,844·47}{124·4}$	<u>£103 5s. 0d.</u>

(b) PRACTICAL METHOD (*Tel Quel* rate):—

Market buying rate for cheques	.. .. .	Fcs. 124·25
Add bank's profit	.. .. .	·15
Interest, 1 month @ 6 %	.. .. .	·62125
Allowances, @ 1 per mille	.. .. .	·12425
		Fcs. 125·1455
<i>Tel quel</i> rate, say,	<u>Fcs. 125·15.</u>	-

$$\text{Amount paid for bill} = \text{£} \frac{12,922}{125·15} = \underline{\underline{\text{£103 5s. 0d.}}}$$

Example 35.—If a London bank quotes its rate for the purchase of three months' trade bills on Spain as 35·00 pesetas per £1, how much will it pay for a four months' trade bill on Spain for 3,570 pesetas?

Discount rates: London, $5\frac{1}{2}$ % trade bills, $5\frac{1}{4}$ % bank bills; Madrid, 8 % trade bills, $7\frac{1}{2}$ % bank bills.

Solution:—

(a) **ADJUSTING PRINCIPAL:—**

Amount of 4 months' bill	3,750	pesetas.
Interest for 1 month at 8 % ..	23·8	
	<u>3,546·2</u>	,,

$$\text{Amount paid by bank} = \pounds \frac{3,546 \cdot 2}{35} = \underline{\underline{\pounds 101 \text{ 6s. 5d.}}}$$

(b) **PRACTICAL METHOD (*Tel Quel* rate):—**

Buying rate for 3 months' bills ..	Ptas. 35·00
Add interest for 1 month @ 8 % ..	·233
	<u>Ptas. 35·233</u>

Tel quel rate, say, Ptas. 35 $\frac{1}{4}$.

$$\text{Amount paid by bank} = \pounds \frac{3,570}{35 \cdot 25} = \underline{\underline{\pounds 101 \text{ 5s. 6d.}}}$$

Example 36.—A banker in Monte Video is offered a 120 days' bill for £1,000 on London. What rate should he apply if his buying rate for 90 days' drafts is $50\frac{1}{4}$ d. discount in London 7 %, and in Monte Video $7\frac{1}{4}$ %?

Solution:—

Buying rate for 90-days' drafts on London ..	50·25	pence
Add interest @ 7 % for 30 days	·289	
	<u>50·539</u>	,,

Tel quel rate = $50\frac{9}{16}$ pence.

"Tel Quel" Rates for Broken Periods.—In the foregoing examples, the interest has been calculated for periods of one or two months, but most bills differ from the quoted periods by a given number of days, and, in such cases, the interest should be calculated by the "third, tenth and tenth rule" given in a previous chapter.

Example 37.—Find how much a London banker will give for a bill on Italy for lire 21,458, due on the 30th of November, purchased in London on the 8th of August. Banker's buying rate for three months' bills is 93·70, and discount in Rome is 5 %.

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Solution:—

Banker's buying rate for 3 months' bills (due on 8th November)	93·70	lire
Add interest for 22 days (November 8th–30th)..	·2824	„
	<u>93·9824</u>	„

Tel quel rate, say, lire 93·99.

$$\text{Amount paid by banker} = \text{£} \frac{21,458}{93 \cdot 99} = \text{£} 228 \text{ 6s. 0d.}$$

Example 38.—On the 5th April you are offered for discount a bill drawn on and accepted by the Crédit Lyonnais, Paris, for Fcs. 100,000. The bill is at 90 days' sight and was accepted on 1st March. It is already French stamped, but does not bear an English stamp. The French rate of discount is 2 % per annum on the basis of a 360-day year; there is a French Government tax of 2 % flat on the discount; the last 8 days' discount is, by French custom, worked at the French Bank rate, which is 3 %; and you are a dealer in Paris cheque at 83·90–84·00. Find the sterling amount for which your cheque should be made out. Mailing period 2 days.

Solution:—

The bill is due on 30th May. It has therefore 55 days to run, i.e., 25 days in April and 30 in May. Since a cheque could be collected in 2 days (mailing period), interest must be allowed for 53 days.

Buying rate for cheques	Fcs. 84·00
Add interest for 45 days at 2 % ..	·21
„ „ 8 days at 3 % ..	·056
	<u>·266</u>
Plus tax (at 2 % on ·266)	·0053
	<u>·2713</u>
	Fcs. 84·2713

Tel quel rate, say, Fcs. 84·27½.

$$\begin{aligned} \text{Amount paid for bill @ } 84 \cdot 27\frac{1}{2} &= \text{£} \frac{100,000}{84 \cdot 2725} \\ &= \text{£} 1,186 \text{ 12 } 6 \\ \text{Deduct stamp ..} & \quad \quad \quad 0 \text{ } 6 \text{ } 0 \\ \text{Proceeds ..} & \quad \quad \quad \underline{\text{£} 1,186 \text{ } 6 \text{ } 6} \end{aligned}$$

NOTE.—The bill stamp is calculated at ¼ per mille. The bill bears no English stamp, so that it must have been drawn abroad.

Example 39.—On 30th September a customer presents to you for

negotiation a bill for \$15,000 on New York payable on 14th December. On the day of negotiation you are prepared to deal in T.T. New York at $4\cdot45\frac{1}{2}$ – 46 . The rate of discount in New York is $4\frac{3}{4}$ % per annum, and is calculated on a 360-day year.

- Calculate (a) Your buying rate for the bill, to the nearest $\frac{1}{4}$ c.;
(b) The amount with which you will credit your customer.

There is no stamp duty on bills in U.S.A., but you will be charged a collecting commission of $\frac{1}{8}$ %.

Solution:—

(a) The bill is due on 14th December. Hence it has 75 days to run (31 in October, 30 in November, 14 in December).

Banker's buying rate for T.T.	.. ..	4·46
Add interest, 75 days at $4\frac{3}{4}$ %	.. ..	·0441
Collecting charge, $\frac{1}{8}$ %	.. ..	·0056
		<u>4·5097</u>

Banker's buying rate (to nearest $\frac{1}{4}$ c.) = \$4·51 per £1.

(b) Value of bills totalling \$15,000 at \$4·51 per £1

$$\begin{aligned} &= \frac{15,000}{4\cdot51} \\ &= \text{£}3,325\cdot942 \\ &= \underline{\text{£}3,325 \text{ 18s. 10d.}} \end{aligned}$$

Example 40.—On the 21st November a customer presents to you for discount a bill for Fcs. 75,000 payable in Paris, due on the 10th January. If the three months' rate on Paris is quoted in the London Market as $125\frac{1}{4}$ – $\frac{1}{2}$, at what rate would you discount the bill, allowing $\frac{1}{16}$ % as your profit, and with how much sterling would you credit the customer's account for the proceeds? Paris discount rate is $3\frac{1}{2}$ %. There are no days of grace in Paris.

Solution:—

Market buying rate for 3 months' bills	..	Fcs. 125·50
Add bank's profit, $\frac{1}{16}$ %	.. ..	·079
Bank's buying rate for bills due 21st February		<u>Fcs. 125·579</u>
But the bill in question is due on 10th January		
Hence an allowance must be made for 42 days		
(10th January–21st February).		
∴ Deduct interest for 42 days @ $3\frac{1}{2}$ %	..	·505
		<u>Fcs. 125·074</u>

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Rate to be applied (to nearest working rate) = Fcs. 125·08.

$$\therefore \text{Credit customer with } \pounds \frac{75,000}{125 \cdot 08} = \pounds 599 \text{ 12s. 4d.}$$

Mixed Parcels.—Parcels of foreign bills usually include bills whose periods differ from the quoted usance, and also from one another. In such cases it is necessary to make an allowance for interest on each bill, but if the customer is agreeable to having the bills “lumped together”, it is possible to work out the proceeds in one calculation as in the following example:—

Example 41.—Find the amount for which a London banker will buy the following bills on Berlin, on the 8th of August, the bills being due on the dates shown. Discount in Berlin 4 % per annum; buying rate for three months' bills 20·13.

Solution:—

Bill.	Date due.	(a).	(b).
Mks. 5,000	21st Oct.	18	90,000
„ 2,500	30th „	9	22,500
„ 7,520	2nd Nov.	6	45,120
„ 10,250	5th „	3	30,750
„ 25,270			<u>188,370</u>

$$\text{„ } 20 \cdot 64 = \text{Interest} = \frac{188370}{365} \times \frac{4}{100} = \frac{1506960}{73000}$$

Mks. 25,290·64

By third, tenth and tenth rule:—

$$\begin{aligned} &= 15 \cdot 070 \\ &\quad 5 \cdot 023 \\ &\quad \cdot 502 \\ &\quad \cdot 050 \\ &\quad \hline &20 \cdot 645 \\ &\quad \cdot 002 \\ &\quad \hline &\underline{20 \cdot 643} \end{aligned}$$

$$\begin{aligned} \text{Proceeds} &= \frac{25290 \cdot 64}{20 \cdot 13} = \pounds 1,256 \cdot 366 \\ &= \underline{\pounds 1,256 \text{ 7s. 4d.}} \end{aligned}$$

METHOD.—In column (a) insert days short (or over) the quoted period (i.e., the difference in days between the maturity of the bills

and 8th November). In column (b) insert the product of the number of days $\times$ amount of bill. Add, and find the interest as shown. As all the bills are due in *less* time than a three months' bill they are worth more, so the interest is *added* to the principal, i.e., the total amount of all the bills. (See Chapter XXIV.)

Flat Rates of Negotiation.—Bills drawn *in sterling* on places abroad (especially South America) and bearing an exchange clause such as "Payable by approved banker's 90 d/s draft on London", are often negotiated at a "flat" percentage rate deducted from the face amount of the bill. The banker, in effect, treats the negotiation of the bill as an advance of sterling for the period from the date of negotiation until the return remittance becomes discountable, and from then as an ordinary sterling discount (see p. 139).

Example 42.—Calculate (a) the "flat" rate of negotiation to be applied to, and (b) the net amount which would be realised by, a bill for £7,823 6s. 8d. drawn from Hamburg on Rio de Janeiro at 90 d/s and claused "Payable by approved banker's draft on London at 90 d/s". The period of the mail between London and Rio is 21 days; the London banker's rate for sterling advances is 5 % per annum; the London discount rate for three months' bank bills is $1\frac{7}{16}$ % per annum; Brazilian stamp duty 3 per mille; and agents' collecting charges $\frac{1}{4}$ %.

Solution:—

(a) "FLAT" RATE OF NEGOTIATION.

Cost of sterling advance for 132 days (90 + 42 days*)			
at 5 % per annum	..	..	1.8082 % flat.
Discount of return remittance—93 days at $1\frac{7}{16}$ % per			
annum	..	..	.3663 % ..
Brazilian bill stamps at 3 per mille	..	..	.3 % ..
Agent's charges at $\frac{1}{4}$ % <i>ad val.</i>	..	..	.25 % ..
			<u>2.7245 % ..</u>

$\therefore$ The bill would be negotiated at a flat rate of, say, $2\frac{3}{4}$ % *ad. val.*

* Note that the advance is made for the period which elapses between the transaction and the receipt of the "return remittance" in London, i.e.,

For the outward mailing period	..	..	21 days
For the period of the bill	..	..	90 ..
For the homeward mailing period	..	..	21 ..
			<u>132 ..</u>

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(b) PROCEEDS OF BILL.

	£	s.	d.
Face amount	7,823	6	8
	£	s.	d.
Less—Negotiation charge of $2\frac{1}{2}\%$..	215	2	10
English bill stamp ($\frac{1}{4}$ per mille)	1	19	6
English bill stamp on return remittance ($\frac{1}{2}$ per mille) ..	3	19	0
	221	1	4
	<u>£7,602</u>	<u>5</u>	<u>4</u>

∴ Net proceeds of bill: £7,602 5s. 4d.

NOTE.—(1) It is important to note that the rate of negotiation applied is a “flat” *ad valorem* percentage, and not a percentage *per annum*.

(2) The charge for English stamps is deducted from the proceeds and not included in the flat rate.

Example 43.—You are asked to negotiate at a flat rate a four months’ date bill on Bombay. It has just been drawn by a Manchester firm, on impressed stamp paper, for £2,904 10s. 7d., and it is expressed to be payable by a banker’s three months’ sight draft on London.

Working on an overdraft rate of $4\frac{1}{2}\%$, mail time 21 days, and return remittance discountable at $2\frac{1}{2}\%$, you can take the Indian stamp duty, collecting commission and charges at an inclusive figure of $\frac{1}{2}\%$.

- Ascertain the rate you would apply to this bill to the nearest $\frac{1}{16}\%$.
- The amount you would credit your customer.
- Explain how you would have dealt with the bill if it were drawn payable by T.T. on London together with interest and collecting charges, as usually incorporated in an Eastern interest bill.

Solution:—

(a) *Flat Rate* for 4 months’ date bill on Bombay:—

Interest, 4 months at $4\frac{1}{2}\%$	1.5	%
„ 21 days at $4\frac{1}{2}\%$	.2589	%
3 months’ discount at $2\frac{1}{2}\%$	.625	%
Commission, etc., at $\frac{1}{2}\%$	.5	%
	<u>2.8839</u>	%

Rate applied, $2\frac{15}{16}\%$ (to nearest sixteenth).

	£	s.	d.	£	s.	d.
(b) Amount of bill				2,904	10	7
Less deduction of $2\frac{1}{16}\%$	85	6	5			
Stamps on return remittance						
($\frac{1}{2}$ per mille)	1	10	0			
					86	16
					5	
				<u>£2,817</u>	<u>14</u>	<u>2</u>

Amount to be credited = £2,817 14s. 2d.

(c) If the bill had been enfaced with an interest clause "Payable at the Bank's selling rate for T.T. on London, together with interest at % per annum from date hereof until approximate date of arrival of remittance in London plus all collection charges", the customer could be credited with the full face value, as the collecting banker can recoup himself from the drawee.

Advance for Mailing Period.—Conditions sometimes justify a foreign banker in treating the purchase of a sterling bill as being an advance of the home currency during the period which must elapse before the bill is discounted, just as in the above examples the English banker treats the first part of the transactions as an advance of sterling. The following example will illustrate this point.

Example 44.—An Indian banker is asked to buy a 4 months' sight bill on London. If the discount rate in London is 3 % and the mailing period is 1 month, calculate the rate he will quote, allowing for stamp duty in London and for the banker's profit of 1 per mille on a T.T. rate of 1s. 6 $\frac{1}{2}$ d. Overdraft interest at the rate of 6 % is to be allowed for on the period of the voyage.

Solution:—

Banker's buying rate for T.T.	18	125
Add Profit, 1 %	018	125
Stamp duty, $\frac{1}{2}\%$	009	0625
Interest at 6 % for 1 month	090	625
Discount at 3 % for 4 months	181	25
	<u>299</u>	<u>0625</u>
		299
		<u>18</u>
		<u>424</u> pence

Say, 18 $\frac{7}{16}$ pence per rupee.

Dishonour d Bills.—When a bill is purchased from a customer and is subsequently dishonoured, the banker has a right of recourse against

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the customer for the amount of the bill together with any necessary expenses incurred through the dishonour. The banker can debit the customer with this amount in currency, and where the customer has a currency account he may be willing to settle the matter in this way. More usually, the transaction is cleared by the customer's *buying* from his bank the necessary amount of currency, which the banker, in effect, pays over to himself, and by the banker's debiting the customer with the sterling cost of the currency.

Example 45.—You negotiate for a customer a 90 d/s draft on a secondary town in Hungary for 30,000 pengöes. On the day when the bill is presented to you, you are willing to deal in cheque Budapest at 27·75–80. The foreign stamp duty is $\frac{1}{2}$ per mille, and there is a “*perte de place*” or collecting charge of $1\frac{1}{2}$ per mille. The rate of discount applicable is 12 % per annum. Calculate the rate for negotiation to the nearest filler and the amount with which you will credit your customer.

At maturity the bill is dishonoured and protested. On the day of its return the market rates for T.T. Budapest are 29·50–55. The protest and other expenses of dishonour amount to 125 pengöes. What amount in sterling will you require from your customer to clear the bill, allowing yourself a turn of 5 fillers in the rate?

Solution:—

Buying rate for cheques	..	..	..	27·80
Add interest, 90 days at 12 %	..	..	..	·822
Charges 2 per mille	..	..	..	·056
				<u>28·678</u>
∴ Buying rate for 90 d/s draft	..	..	..	<u>28·68</u>

Value of 90 d/s draft for 30,000 pengöes

$$= \text{£} \frac{30,000}{28·68}$$

$$= \text{£}1,046·025$$

Amount credited to customer = £1,046 0s. 6d.

Marked selling rate at maturity = 29·50

∴ Banker's selling rate at maturity = 29·45

Amount required from customer = $\text{£} \frac{30,125}{29·45}$

$$= \text{£}1,022·920$$

$$= \text{£}1,022 \text{ 18s. 5d.}$$

Example 46.—You discount for a customer a bill for £1,000, drawn from London on a secondary town in Holland. It is at 90 d/s, and bears the clause: “Exchange as per endorsement.” The foreign stamp duty is $\frac{1}{2}$ per mille, and there is a “*perte de place*”, or collecting charge, of $1\frac{1}{2}$ per mille. On the day of negotiation you are ready to deal in cheque Amsterdam at $12\cdot09-09\frac{1}{4}$. The rate of discount applicable is $4\frac{1}{2}$ % per annum.

- (a) Work out the amount in florins for which you will make the bill payable.
- (b) At maturity the bill is dishonoured and protested. On the day of its return you are prepared to deal in T.T. Amsterdam at $12\cdot07\frac{1}{2}-07\frac{3}{4}$. The protest and other charges of dishonour amount to Fls. 57. What amount in sterling will you require from your customer to clear the bill?

Solution:—

(a) Buying rate for cheques	..	..	..	Fl. 12·0925
Add stamp duty and collecting charges				
2 per mille..	..	..	..	·0242
Interest, 90 days at $4\frac{1}{2}$ %	..	..	..	·1342
				<u>Fl. 12·2509</u>

∴ Banker's buying rate for 90 d/s draft = Fls. 12·2509 per £1,
say, 12·25 $\frac{1}{4}$.

Bill will be made payable for Fls. 12,252·50.

(b) Amount of bill	..	..	..	Fls. 12,252·50
Add protest and other charges	..	..	..	57·00
				<u>Fls. 12,309·50</u>

∴ Amount required from customer = $\pounds \frac{12,309\cdot5}{12\cdot075}$
= £1,019 8s. 5d.

Reverse Stock Drafts.—The method of calculating the rate to be applied to a reverse stock draft has already been explained (p. 125). The following provides another example.

Example 47.—A London banker is asked by a stockbroker to arrange for the payment in New York of a cheque on London for \$1,319·65. The draft will have attached to it a parcel of bonds. Allowing eight days for mailing, $\frac{1}{4}$ % for insurance and 3 % interest

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in London, how much will the banker charge the stockbroker, if he is a dealer in T.T. at $\$5\cdot04\frac{1}{4}-\cdot04\frac{3}{8}$?

Solution:—

Selling rate for T.T.	\$5·0425
<i>Deduct</i> Interest for 8 days at 3 %	·0033
Insurance, $\frac{1}{4}$ %	<u>·0126</u>
	·0159
	<u>\$5·0266</u>

Rate applied, say, $\$5\cdot02\frac{11}{16}$

∴ Sterling amount for which stockbroker will be liable = $\frac{1,319\cdot65}{5\cdot026875}$

= £262 10s. 5d.

CHAPTER XXVIII

EXCHANGE DEALING

THE arithmetical operations arising from ordinary exchange dealing, i.e., buying and selling foreign currency, are of the simplest possible nature, since they merely involve conversions from one currency to another. In practice, the majority of such conversions are effected with great rapidity by calculating machines, and the only points of difficulty arise in the application to the particular transaction concerned of the correct rates, buying or selling as the case may be, and in adequately and correctly allowing for all expenses which may be involved.

It is obviously of the first importance that, in calculating the rates of exchange at which he is prepared to operate, or at which he proposes to operate, the dealer should accurately take into account all charges which he has to incur, such as brokerage, postages, telephone calls, telegrams, cables and foreign agents' commission, together with interest, if any, lost or gained on the funds involved.

Interest must be allowed at the correct rate for each day that the bank is out of its funds, or for each day that it has the use of funds. Commission or profit must be reckoned, where necessary, for the bank's agent in another centre who is required to execute a purchase or a sale for account of the operating banker. Even though such commission or profit may not be chargeable by the agent as a separate item on a given transaction, it must not be overlooked that there may be a reciprocal arrangement for charging, say, $\frac{1}{16}$ or $\frac{1}{8}$ per mille on the turnover of the operating bank's foreign currency account, and such a charge must, of course, be allowed for by a dealer who is working on a fine margin of profit. Brokerage must also be taken into account in any deals with the Market, but it does not of course arise in connection with deals with customers.

Special care is required in connection with brokerages, since these are usually of very small amount "in the rate", but may be considerable on a deal of any importance. The following table gives the

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list of brokerages payable in London at the time of writing on the most important currencies, but it must be understood that the rates are in no sense fixed.

LIST OF LONDON EXCHANGE BROKERAGES PAYABLE BY BOTH SIDES WITH A MINIMUM OF 2s. 6d. EACH SIDE.

CURRENCY						
U.S.A.	..	..	..	..	£1 10 0	per 100,000
Canada	..	..	..	..	£2 0 0	per 100,000
France	..	..	..	..	2 0	per 100,000
Belgium	..	..	..	..	10 0	per 100,000
Germany	..	..	..	..	£1 10 0	per 100,000
Italy	..	..	..	..	4 0	per 100,000
Holland	..	..	..	..	£1 5 0	per 100,000
Spain	..	..	..	..	12 6	per 100,000
Norway	..	..	..	..	12 6	per 100,000
Denmark	..	..	..	..	12 6	per 100,000
Sweden	..	..	..	..	12 6	per 100,000
Switzerland	..	..	..	..	12 6	per 100,000
Greece	..	..	..	..	10 0	per 100,000
Egypt	..	..	..	..	3 4	per £E 1,000
Belgrade	..	..	..	..	10 0	per 100,000
Bucharest	..	..	..	..	5 0	per 100,000
Budapest	..	..	..	..	$\frac{1}{2}$	pengo
Constantinople	..	..	..	..	1 %	of Sterling Equivalent
Dantzic	..	..	..	..	£1 0 0	per 100,000
Helsingfors	..	..	..	..	10 0	per 100,000
Kovno	..	..	..	..	£1 0 0	per 100,000
Lisbon	..	..	..	..	12 6	per 100,000
Prague	..	..	..	..	10 0	per 100,000
Reval	..	..	..	..	£1 0 0	per 100,000
Riga	..	..	..	..	£1 0 0	per 100,000
Sofia	..	..	..	..	10 0	per 100,000
Warsaw	..	..	..	..	£1 0 0	per 100,000

Ordinary Buying and Selling.—As an example of the manner in which a dealer makes profits from ordinary dealing in exchange, we may suppose that an operator buys, say, \$100,000 at 4·84 $\frac{1}{2}$, and sells \$100,000 at 4·84 $\frac{5}{8}$. The sterling equivalents are £20,629 3s. 10d. and £20,634 10s. 2d., and the gross profit is, therefore, £5 6s. 4d. How much of this is net profit depends on the circumstances of the case. If the dollars are bought from one customer to the debit of his dollar account and are sold to another customer to be credited to a dollar account, the bank has practically no expenses except for cables, and makes about £5 profit. If, however, both deals are done on the London Market, the bank has to pay two brokerages of 30s. 0d. each and two cables (a “pay” and a “receive”) costing about 5s. each, thus reducing the net profit to £1 16s. 4d.

Although brokerages, as indicated by the foregoing table, are usually quoted as so many shillings and/or pence for a quantity of foreign currency concerned, dealers who have to take brokerage into account when transacting business for customers or with the Market facilitate their operations by reckoning the brokerages as so much "in the rate". In other words, a dealer who receives a given quotation from the Market will mentally figure out the "all-in" price of the currency concerned by allowing for the brokerage which will have to be paid. When rates of exchange are stable, the equivalents of the brokerages in the various rates are naturally subject to little alteration, but when rates are frequently fluctuating, as they are at the time of writing, the equivalents must be calculated by the dealer as often as the rates move sufficiently to affect the equivalent.

Example 1. The present rate of brokerage on French francs is £1 per million to each dealer, and on dollars £1 10s. per \$100,000. If francs are 80 to the £1 and dollars are 4·50, ascertain:—

- The proportion of brokerage per mille (i.e., per £1,000).
- What the brokerage amounts to "in the rate".
- Buy \$100,000 at 4·50½ and sell them at 4·50.

Deduct two brokerages as above, and ascertain net profit.

Solution:—

- Fcs. 1,000,000 at 80 = £12,500.

A brokerage of £1 on £12,500 is equivalent to

$$\frac{1}{12,500} \times \frac{1,000}{1} \text{ per mille} = \underline{\underline{.08 \text{ per mille.}}}$$

$$\text{\$100,000 at } 4\cdot50 = \text{£ } \frac{100,000}{4\cdot50} = \text{£22,222 approx.}$$

A brokerage of £1 10s. on £22,222 is equal to

$$\frac{1\cdot5}{22,222} \times \frac{1,000}{1} \text{ per mille} = \underline{\underline{.0675 \text{ per mille.}}}$$

$$(b) \text{ .08 per mille on 80 francs} = \text{Fcs. } \frac{.08 \times 80}{1,000} = \frac{6\cdot4}{1,000}$$

$$\therefore \text{ Brokerage on francs} = \text{Fcs. } \underline{\underline{.0064 \text{ in the rate.}}}$$

$$\text{.0675 per mille on } 4\cdot50 = \frac{.0675 \times 4\cdot50}{1,000} = \frac{.30375}{1,000}$$

$$\therefore \text{ Brokerage on dollars} = \underline{\underline{\$.0003 \text{ in the rate.}}}$$

$$(c) \text{ \$100,000 sold @ } 4\cdot50 \text{ realise } \text{£ } \frac{100,000}{4\cdot50} = \text{£ } 22,222 \quad \begin{array}{cc} \text{s.} & \text{d.} \\ 4 & 5 \end{array}$$

$$\text{\$100,000 bought @ } 4\cdot50\frac{1}{2} \text{ cost } \text{£ } \frac{100,000}{4\cdot5025} = 22,209 \quad \begin{array}{cc} 17 & 8 \end{array}$$

$$\text{Gross Profit} = \underline{\underline{\text{£12 } 6 \text{ } 9}}$$

$$\text{Deduct 2 Brokerages @ £1 10s.} = \underline{\underline{3 \text{ } 0 \text{ } 0}}$$

$$\text{Net Profit} = \underline{\underline{\text{£9 } 6 \text{ } 9}}$$

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Example 2.—What allowances should a London banker make in his rates on Paris and New York respectively, to cover: (1) a commission of $\frac{1}{2}$ per mille; (2) brokerages of 2s. per Fcs. 100,000 and £1 10s. per \$100,000 respectively? Assume basic rates of Fcs. 80·25 $\frac{1}{2}$ and \$4·75 $\frac{1}{2}$. State whether the allowances should be added to or deducted from his rates (a) for buying, (b) for selling, and give two examples of such adjustments.

Solution.—

$$(1) \frac{1}{2} \text{ per mille on Fcs. } 80\cdot25 = \frac{1}{2,000} \times \frac{80\cdot25}{1} \\ = \text{Fcs. } \cdot04 \text{ approx. (or 4 centimes).}$$

$$\frac{1}{2} \text{ per mille on } \$4\cdot75 = \frac{1}{2,000} \times \frac{4\cdot75}{1} \\ = \$\cdot002375 \text{ (or } \frac{1}{4} \text{ cent).}$$

(2) 2s. per Fcs. 100,000, when francs are 80·25 £1
is equivalent to Fcs. 8 per 100,000
or ·08 per mille.

$$\cdot08 \text{ per mille on Fcs. } 80\cdot25 = \frac{\cdot08}{1,000} \times \frac{80\cdot25}{1} \\ = \text{Fcs. } \cdot0064 \text{ (say } \frac{1}{2} \text{ centime).}$$

30s. per \$100,000, when dollars are 4·75 £1

is equivalent to $\frac{4\cdot75 \times 3}{2}$ per 100,000

$$\text{or } \frac{4\cdot75 \times 3}{200} \text{ per mille}$$

$$= \cdot07125 \text{ per mille.}$$

$$\cdot07125 \text{ per mille on } \$4\cdot75 = \frac{\cdot07125}{1,000} \times \frac{4\cdot75}{1} \\ = \$\cdot00034 \text{ (say } \frac{1}{2} \text{ cent).}$$

For *buying*, these allowances should be *added* (Buy High).

For *selling*, they should be *deducted* (Sell Low).

Thus, given basic rates of Fcs. 80·25 $\frac{1}{2}$ and \$4·75 $\frac{1}{2}$, the following adjustments are needed:—

FRANCS.

Buying rate would be Fcs. 80·25 $\frac{1}{2}$ *plus* 4 c. $\frac{1}{2}$ c., say, Fcs. 80·30.

Selling rate would be Fcs. 80·25 $\frac{1}{2}$ *less* 4 $\frac{1}{2}$ c., say, Fcs. 80·20 $\frac{1}{2}$.

DOLLARS.

Buying rate would be \$4·75 $\frac{1}{2}$ *plus* $\frac{1}{2}$ c. $\frac{1}{2}$ c., say, \$4·75 $\frac{1}{2}$.

Selling rate would be \$4·75 $\frac{1}{2}$ *less* $\frac{3}{4}$ c., say, \$4·75 $\frac{1}{4}$.

Example 3.—Given that the expenses incurred by a banker on a deal of Fls. 20,000 amount to £2, calculate what margin he should allow for these expenses on a rate of Fls. 8·05 per £1.

Solution :—

$$\begin{aligned}
 &\text{£2 converted at Fls. } 8 \cdot 05 \quad \text{Fls. } 16 \cdot 10 \\
 &\text{Fls. } 16 \cdot 10 \text{ on Fls. } 20,000 = \frac{16 \cdot 10}{20,000} \times \frac{1,000}{1} \text{ per mille} \\
 &\quad = \cdot 805 \text{ per mille;} \\
 &\cdot 805 \text{ per mille on Fls. } 8 \cdot 05 = \frac{8 \cdot 05 \times \cdot 805}{1,000} \\
 &\quad = \text{Fls. } \cdot 0065 \\
 &\text{Say, } \underline{\underline{1 \text{ cent.}}}
 \end{aligned}$$

NOTE how the charge is expressed first as a per milleage. This step is not essential, of course, but it is desirable to include it, as a per milleage can often be more easily handled than a mere fraction.

Exchange Operations with Foreign Centres.—Apart from the deals effected with customers and those transacted on the London Market, a London dealer carries out a considerable number of deals on foreign markets. These he effects through the intermediary of his agents abroad, to whom his instructions are sent usually by telephone, telegram or cable. On his part, the dealer carries out deals on the London Market on behalf of his correspondents, and in some cases he operates on joint account with such agents.

When the business is transacted by telephone, the parties concerned (who are in constant touch with their respective markets) compare rates and arrange the bargains during the period of the call, the transactions being subsequently confirmed in writing.

If telegrams or cables are used, the time taken to execute the business will depend on the distance between the centres and on the expedition with which the message is dealt with by the Post Office or the cable company concerned. Apart from the fact that all such messages must be properly authenticated, the operating banker must, of course, give his correspondent precise instructions as to whether or not he is to use his discretion in executing the order; i.e., whether the agent is to buy or sell at the best rate obtainable ("*at best*"), or at a *limited rate*. And in either case the operating banker may impose a *time limit* within which he requires the transaction to be executed, for he cannot, of course, keep business indefinitely open on this side while his correspondent searches his own market for a buyer or seller.

With the object of saving expense on telegrams and cables, messages involving orders to buy or to sell are expressed in abbreviated form wherever possible, certain symbols and contractions being employed which are made up by the dealers concerned in such a manner as to be intelligible to the recipients.

The made-up words, though usually only abbreviations of plain

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English, are accepted as code for transmission by the cable companies provided they do not contain more than a specified number of letters or figures, but the limits have been varied from time to time. At the time of writing the limit per word is *five* letters or figures, but the following examples, which were compiled when the limit was *ten* letters or figures, are retained because no change of principle is involved.

Message : BUYMILAN HAFMILION BEST

Interpretation : Buy 500,000 lire at the best rate obtainable on our account.

Message : SOLDOLS HALFMIL 48626

Interpretation : We have sold \$500,000 at 4·86½ on your account.

(NOTE.—The rate is always understood to be in decimals, which, in the case of the New York rate, are given to the fourth place. Thus 5·01½ is 5·01125, but is given as 50112; 5·01¼ is 5·014375, but is given as 50143, and so on.)

Message : LIMIT 2680 SELDOLS TWOHUNTHO

(Sent to Stockholm)

Interpretation : Sell \$200,000 at a rate not higher than \$26·80 per 100 kronor.

Message : LIMIT 2680 BUYOSLO HUNTHOJNT REPLYHERE FIVLATEST

(Sent to New York)

Interpretation : On our joint account buy 100,000 Norwegian kroner at not more than 26·80 cents per krone and subject to your advice being received here not later than 5 o'clock to-day.

Message : BESTPOSSEL HUNFIFTHO DOLLARS FRI

Interpretation : At best possible rate sell \$150,000, value Friday.

Message : SLPDSTWNTY THOFRIAGST ENDAUGUST

Interpretation : Sell at best possible rate £20,000 value Friday against a purchase of the same amount for delivery at the end of August.

Message : OFRYOUEM SVNTYFVTHO 48487 DOUAGREE

Interpretation : We offer you a demand draft on London for £75,000 at 4·84½. Do you agree?

Message : SLRSTWOHUN THOMONTRL NOVFIFFTEEN ORYOUROPTN NOVEMBER 48581

Interpretation : We are sellers of 200,000 Canadian dollars (i.e., Montreal) value 15th November or delivery at your option during November, at 4·85½.

Message : BUYJOINT OSLOCOP HUNTHEACH REPLYHERE FOUR-LATEST

Interpretation : On our joint account buy 100,000 Norwegian kroner and 100,000 Danish kroner, subject to your advice being received here not later than four o'clock to-day.

Message : REMIT ZURICH TWOHUNTHO BEST

(To Milan)

Interpretation : Buy 200,000 Swiss francs on our account at the best rate obtainable against your own currency, i.e., lire.

Message : HOWYUGIVE TWOHUNTHO PARIS SPOTAGST ENDAUGUST

Interpretation : At what rate will you sell 200,000 French francs spot against a similar amount deliverable at the end of August; i.e., at what rate will you "swap" 200,000 Fcs. spot against 200,000 Fcs. forward, end August.

Message : SWAPPARIS FIFTYCENTS YURFAVOUR

Interpretation: We will swap the French francs at 50 cents in your favour.

Message : SELLPARIS FIVHUNTHO FRIDAGST THREEMOS FIFTCENTS OURFAVOUR

(From Paris)

Interpretation : Sell 500,000 French francs on our account for delivery Friday against purchase of three months forward francs at a difference of 50 c. in our favour.

If the London spot rate is, say, 124·20--30, the rates applicable to the swap will be 124·30 and 124·80, i.e., the forward, to be sold at 50 centimes in favour of the French buyer, must be higher than the spot.

Message : BYPARISPOT TWOHUNFIF THOGSTDOLS LIMIT 393

(From New York)

Interpretation: Buy 250,000 T.T. Paris against dollars on our account at a rate not worse than 393 cents per 100 francs.

As is indicated above, it is the practice to employ five figures such as 48631 as a code meaning $4 \cdot 86 \frac{5}{16}$ ($4 \cdot 863125$ abbreviated), but this should not be done unless the abbreviation is understood by the dealer on the other side. Cases have occurred where the symbol has been taken *literally*. Thus

HUNTH PDS 48631

has been interpreted as £100,000 at $4 \cdot 8631$ and \$486,310 have been paid instead of \$486,312·50 as expected. For this reason any dealer who proposes to use this form of abbreviation should do so only if his agent abroad clearly understands that the dealer will always deal in fractions of a cent.

Orders to Buy and Sell at Best.--If the cabled or telegraphed message containing an order, despatched to or received from a correspondent, contains no reference to a rate, it is understood to mean that the operation is to be transacted at the best rate obtainable. Thus a telegram to a London dealer from his agent in Stockholm instructing the dealer to buy \$500,000 at best might be worded:--

" Bydls hafml best.

Surebk."

In such a case, the reply and advice to the Swedish bank might read:—

" Btdls hafml 48631.

Lombk."

By this message the Swedish banker understands that his London correspondent has bought \$500,000 at $4 \cdot 86 \frac{5}{16}$ per £1 on his account.

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and he will, if necessary, take steps to cover the transaction by selling the requisite amount of dollars and purchasing the sterling required to meet the debt against him in London.

Example 4.—A London dealer has bought Kr. 150,000 (Stockholm) from a Continental seller at 18·15, being under the impression that they could be sold at a better price. Unfortunately the Market here turns against him, so he decides to sell the kronor in New York and accordingly wires his agent there at close of business in London:—

“SELL BEST 150,000 STOCKHOLM AGAINST DOLLARS”

In anticipation of the execution of this order he sells a round amount of dollars (\$45,000) against the expected proceeds of the kronor, at the market rate of 5·35½.

The dealer in New York wires execution at \$29·75 per Kr. 100.

- (a) At what equivalent rate (1 kronor per £1) has the dealer really sold the kronor?
 (b) What will be his profit or loss, ignoring expenses?

Solution :—

(a)	? How many kronor	£1
	if £1	\$5·35½
	and \$29·75	100 kronor
	535·5	
	= 29·75	Kr. 18 per £1.

		£	s.	d.
(b)	The dealer buys Kr. 150,000 @ 18·15	8,264	9	3
	In New York, Kr. 150,000 sold @ \$29·75 per 100			
	realise \$1,500 × 29·75 = \$44,625, which have			
	been covered @ 5·35½ and so realise £	8,333	6	8
		5·355		
	Profit	£68	17	5

Example 5.—A Stockholm banker has sold \$100,000 to a customer at Kr. 3·733 per dollar and wishes to cover through London. He telegraphs a London dealer to buy the dollars at best (e.g., “*Bydls lunth best*”) and is informed by wire that they have been obtained at 4·86½ (e.g., “*Bydls lunth 48625*”). If the Stockholm banker can purchase the sterling necessary to cover his purchase of dollars at 18·15, what is his profit or loss on the transaction in terms of kronor? Ignore expenses and charges.

Solution :—

Proceeds of sale to customer	100,000 × 3·733	Kr. 3,733,000
	100,000	
Sterling cost of \$100,000 @ 4·86½	£4·8625	
	100,000 × 18·15	Kr. 3,732,648
Kr. cost of covering sterling	4·8625	
	Profit	Kr. 352

Limit Orders.—If the foregoing order to the London dealer was to be executed at a limit, the message might read:—

“ *Limit 48625 bydls lunth.
Swebk.* ”

The figure of 4·86½ would have been arrived at by the Stockholm banker after consideration of the rates at which sterling and dollars were respectively quoted in Stockholm, for he would not, of course, instruct the London dealer to buy dollars against sterling up to the limit specified if he were able to get them any cheaper in Stockholm or, for that matter, in any other centre.

Occasionally the correspondent may be given limits in respect of two or more currencies, and he may be instructed to buy or to sell that currency whose current price is the nearest to the given limit. Or the agent may be asked to sell one currency and to buy another, for the account of the operating dealer, at or better than certain limits.

In such cases it rarely happens that the prevailing market rates agree with the limits fixed by the dealer forwarding the message, and the agent must therefore determine first of all whether the order is to be executed or not.

Viewing the matter from the point of view of London, we see that, for a simple order to buy or to sell a given currency, all the dealer has to do is to determine whether present rates are better or worse than the limits quoted. For this purpose it is necessary to bear in mind the maxim previously referred to for *currency* rates:—

“ Buy high, sell low,”

the reverse being true for *pence* rates. That is to say, if he is buying he must watch for a present rate in foreign money which is equal to or *higher* than the limit quoted, and he would not execute the order if the rate had dropped below the limit fixed by his correspondent. On the other hand, he would watch for an equivalent rate or a *lower* rate in foreign money if he had to sell foreign currency, and he would not execute a sale order if the rate concerned had risen above the limited price.

In accepting such “limit orders” from the *customers*, it is the practice of bankers to disclaim all responsibility for their execution. Customers frequently leave limit orders good for, say, three months at a rate well removed from the current rate; and it is quite possible that the rate may momentarily touch the stipulated figure without there being any possibility of executing the order. For example,

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if an order is given to sell dollars at 4·90 at a time when the current rate is about 4·95, it is possible that at some time the rate may drop to the figure stipulated, and an odd deal or so be done at that figure; yet within the next five minutes the rate may rally two cents or so. It is, therefore, the practice to stipulate when acknowledging limit orders received from customers that "while this order will receive our careful attention, it is accepted only on the understanding that we incur no liability for its execution, even though the rate reach the stipulated limit".

This precaution is not, however, usually necessary in respect of orders received from banks, as such orders are rarely good for longer than half an hour or so, or, perhaps, overnight.

Optional Orders.—A currency which is under strict Governmental control may only be saleable or purchaseable with difficulty. In such a case, in order to give the correspondent in the centre concerned a reasonable chance to fulfil an order, alternative methods are offered. Suppose, for example, that a London dealer requires blocked pengőes and that he instructs his agent in Budapest to buy some for his account. Now, if the order is sent "Buy P. 100,000 at best", the restricted nature of the local exchange market may make it difficult for the Budapest agent to secure the currency at anything like a reasonable price. In such a case, the London bank will wire "Buy P. 100,000 against pounds, dollars or any gold currency whichever is best", thus giving the local dealer a chance to fix up a deal in his own town on the easiest and best terms.

Example 6.—A London bank cables its Hungarian correspondent:—

"Buy 100,000 Budapest against sterling or "
"Zurich whichever best",

and receives a wire—

"Bought for your account Pengőes 100,000 pay "
"Credit Suisse Zurich our account Swiss "
"Francs 42,400".

At what rate does the London bank obtain the pengőes, if the London Market rate for Swiss francs is 15·90- $\frac{1}{2}$?

Solution :—

The cost of Sw. Fcs. 42,400 bought in London is

$$\frac{42,400}{15\cdot90} = \text{£}2,666\ 13s.\ 4d.$$

In exchange for this, the London bank is credited with Peng. 100,000.

∴ The rate at which he gets the pengőes is

$$\frac{100,000}{2,666\cdot6} = \underline{\text{Peng. } 37\cdot50 \text{ per £1.}}$$

An alternative method is for the London dealer to quote actual figures to indicate the relative values of sterling and any other currency. Thus, he may cable his agent in Prague: "Sell £500 or Sw. Fcs. 8515, whichever better."

If his agent replies: "Sold £500 121", he knows that the agent has sold a T.T. on him for £500, at Kr. 121 = £1, realising Kr. 60,500. In effect, the London dealer has obtained Kr. 60,500 for £500.

By wording his cable as above, the dealer indicates to his agent that, in London, £500 was equivalent to Sw. Fcs. 8,515; consequently, if his agent could obtain more kronen for one currency than for the other, he was to sell that currency which produced most kronen.

Covering Operations.—Usually, the orders received by a London dealer from abroad instruct him to buy or to sell a foreign currency *against sterling*, but sometimes he is instructed to buy or to sell one foreign currency *against another foreign currency*, probably at limited rates.

A London dealer may be instructed to buy francs against marks, i.e., to buy francs and to cover by selling marks, or he may be instructed to sell dollars and to cover by the purchase of Swedish kronor. The correspondent may supply the dealer with limited rates applicable to both currencies, or, as is often the case nowadays, he will merely supply a limited rate for the exchange between the two currencies concerned.

Whichever method is adopted, it devolves upon the dealer who has to carry out the transaction to determine whether the existing rates for the currencies involved are such as to enable him to execute the order with advantage to his correspondent whilst retaining the usual profit or "turn" for himself.

If the agent supplies two limited rates, and market quotations for both currencies have improved, the operation can, of course, be carried through, whereas if both have got worse for the particular transaction, i.e., purchase or sale, as the case may be, the order cannot be executed. Frequently, however, one rate improves while the other gets worse, and in this case it is necessary to determine whether the gain on one compensates for the loss on the other.

Theoretically, we may do this by the simple arithmetical process of expressing improved rates as *improper* fractions, and deteriorated rates as *proper* fractions, thereafter simplifying into decimal quantities. An improvement is indicated by a quantity above unity, whereas deterioration is shown by a decimal. If the amount by which one fraction falls short of unity is made good by the excess of the

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other fraction above unity, then the operation can be made, and the simplest way to determine this is to add the two quantities, and find if they are greater or less than 2.

Example 7.

Order: Buy francs @ 124.25; sell marks @ 20.40

Present rates: Paris 124.20, Berlin 20.38.

Solution :—

For buying Paris has deteriorated, for selling Berlin has improved, and if the improvement compensates for the loss the order can be executed.

$$\begin{aligned}\text{Worse rate, Paris} &= \frac{124.20}{124.25} = .9996 \\ \text{Better rate, Berlin} &= \frac{20.40}{20.38} = \frac{1.0009}{2.0005}\end{aligned}$$

The operation can therefore be conducted, as the loss on one transaction is more than made up by the gain on the other.

Example 8.

Order: Buy francs @ 124.25; sell Buenos Aires @ 47½.

Present rates: Paris 124.30, Buenos Aires 47½.

Solution :—

Paris is better for buying, Buenos Aires (in sterling) worse for selling

$$\begin{aligned}\text{Better rate} &= \frac{124.30}{124.25} = 1.0004 \\ \text{Worse rate} &= \frac{47.375}{47.5} = \frac{.997}{1.9974}\end{aligned}$$

The order cannot be executed.

Example 9.

Order: Remit to Berlin @ 20.38; draw * on Amsterdam @ 12.11.

* In transactions of this kind "remit" means *buy* the foreign currency and "draw" means *sell* it.

Present rates: Berlin 20.41, Amsterdam 12.12.

Solution :—

$$\begin{aligned}\text{For buying Berlin is better,} & \quad \therefore \frac{20.41}{20.38} = 1.0014 \\ \text{For selling Amsterdam is worse,} & \quad \therefore \frac{12.11}{12.12} = \frac{.9991}{2.0005}\end{aligned}$$

Order can just be executed.

Equivalent Rates.—The method given under the last heading is only a rough-and-ready method that is not mathematically exact, and it cannot be relied upon where the margin above or below 2 is very small or where wide fluctuations have occurred. A more accurate method is to take the present price which has improved, and to calcu-

late, by proportion, the value of the other rate to which the banker is limited if he wishes to carry through the operation without loss.

To do this, express the two limited rates and the improved present price as ratios, representing the unknown value of the deteriorated rate by x . When x is determined, it is then a simple matter to decide whether the actual present rate given will enable the transaction to be completed or not.

Example 10.

Order: Buy francs @ 124·30; sell marks @ 20·41.

Present prices: Paris 124·25, Berlin 20·40.

Solution :—

Berlin has improved for selling, therefore the Paris rate can get worse for buying, i.e., go down. Find how low the Paris rate can fall and yet permit the transaction to be carried through without loss.

$$\therefore \frac{20\cdot41}{20\cdot40} = \frac{124\cdot30}{x}, \therefore x = \frac{124\cdot30 \times 20\cdot40}{20\cdot41} = 124\cdot24 \text{ (approx.)}$$

This indicates that the Paris rate at 124·24 would just permit the operation to be made without loss, but as the present rate of 124·25 is higher than this, the order can be profitably executed.

Example 11.

Order: Buy francs @ 124·35; sell Argentine pesos @ 47½.

Present rates: Paris 124·50; Buenos Aires 47½.

Solution :—

Paris has improved for buying, therefore Buenos Aires can get worse for selling without loss, i.e., the rate can fall, so find equivalent rate :—

$$\therefore \frac{124\cdot50}{124\cdot35} = \frac{47\cdot4375}{x}, \therefore x = 47\frac{1}{2} \text{ (approx.)}$$

At the rate of 47½ on Buenos Aires, the order could just be executed without loss, but the Buenos Aires rate has dropped further, to 47½, so the order cannot be completed.

Equivalent rates are also required where only one present rate is given, and it is necessary to determine the limit in the price for the other operation.

Example 12.

Order: Buy francs @ 124·43; sell marks @ 20·43.

Present price of francs is 124·30, what is the equivalent rate on Berlin at which the operation can be made without loss?

Solution :—

Paris is worse for buying, therefore Berlin must improve for selling, i.e., go down.

$$\therefore \frac{124\cdot43}{124\cdot30} = \frac{20\cdot43}{x}, \therefore x = 20\cdot408$$

The Berlin rate must drop to 20·408 or less to prevent loss. In other words,

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since more has to be paid for francs, more must be obtained for the marks sold to cover.

Example 13.

Order: Buy lire @ 92.25; sell Argentine pesos @ 47½.

Present price on Milan is 92.45, what rate on Buenos Aires can be used if no loss is to be incurred?

Solution :—

Milan is better for buying, therefore Buenos Aires can get worse for selling, or go down in sterling, consequently because I can buy lire at a cheaper rate than the limit fixed by my correspondent, I can accept slightly less for pesos.

$$\therefore \frac{92.45}{92.25} = \frac{47.3125}{x}, \therefore x = 47\frac{1}{2} \text{ (approx.)}$$

Example 14. Sale of Dollars against Kroner.

A London dealer receives a cable from his Oslo correspondent "Sell fifty thousand dollars limit 37375". If the brokers call Oslo 18.20 23 and New York 4.86½-¾, can the dealer execute the order at a profit to himself, and if so, of how much, expressed in cents in the dollar rate?

Solution :—

The correspondent must get for each dollar not less than 3.7375 kroner, which the dealer can buy in the market at Kr. 18.20 per £1.

By Chain Rule, the dollar parity is:—

$$? \$ = £1.$$

$$£1 = 18.20 \text{ K (the rate at which kroner are offered in London, i.e., the Market's selling rate).}$$

$$\text{Kr. } 3.7375 = \$1.$$

$$\frac{18.20}{3.7375} = \$4.86956$$

Therefore, at the limit given in the telegram, the dealer would be purchasing the dollars from his correspondent on a basis of approximately \$4.86½ per £1. He can sell them in the London Market at 4.86½, and thus get a gross profit of

$$\$4.86\frac{1}{2} - 4.86\frac{1}{2} = 2\frac{1}{2} \text{ cents per } £1.$$

Comparison of Rates at Two Centres.—There are generally two distinct rates of exchange between any two centres at the same time. For instance, between Madrid and London there is the London rate on Madrid, and also the Madrid rate on London. Either or both of these may be short or long rates, or the method of quotation may differ in some other respect. If the rates are both short, they are usually tending towards equality, whereas if they are long rates they may differ by the period which they have to run, and also by the difference between the interest calculated at the home and foreign discount rates.

It is frequently necessary to compare these direct rates existing at two centres, in order to determine the most advantageous method for transferring funds or for paying debts.

In order to make the comparison, the rates on the two centres must be reduced to the corresponding short rates if they are not already so expressed, and both rates must be expressed in the same terms.

There are three cases to be considered:—

- (1) If both short rates are given, and they are quoted in the same way, they can be compared at once.
- (2) If one short rate is quoted in a different way from the other, e.g., one in sterling and the other in currency, a calculation is necessary to express one in the same way as the other.
- (3) If a long rate or long rates are quoted, they must be reduced to short rates by adding or subtracting interest for the period quoted at the foreign discount rate, afterwards changing them to quotations of the same kind. The interest must be taken into calculation because it affects the two rates concerned in opposite ways. Allowances for stamp and risk and for other charges can be neglected, because they are usually too small to affect the result. If, however, they are appreciable, they must be adjusted in the usual way.

To Determine which Rate is Best for Remittances or Returns.—

When any necessary calculation has been made, and both rates are expressed at the short prices in the same terms, it is possible to decide which of the two rates can be more advantageously used for the transfer of money. For the sake of clearness, the operations are considered from the London point of view, but the application of the theory is the same wherever the dealings take place.

In exchange operations in England, the term “remittances” is used for transfers of money from England to foreign countries, and the expression “returns” for transfers to England from other countries. In other words:—

For *remittances*, England is the *debtor* and must pay.

For *returns*, England is the *creditor* and should receive.

Remittances.—Money leaving England.

- (1) London can buy and remit currency of the foreign centre in the form of T.T., M.T. or bills on that centre, i.e., London is a *buyer* of the foreign currency against payment of sterling ; or

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- (2) The foreign centre can offer sterling for sale, in the form of drafts, M.T. or T.T. on London. In this case also London pays out sterling.

Returns.—Money from abroad to England.

- (1) London can sell the currency of the foreign centre as drafts, T.T. or M.T., i.e., London is a *seller* of foreign currency and recipient of sterling ; or
 (2) The foreign centre can buy and remit sterling in T.T., M.T. or bills on London. Here again London receives sterling.

Example 15.

London on Paris short rate = 124·18.
 Paris on London short rate = 124·20.

Which rate is the better for remittances from London, and how should payment be made?

Solution :—

As sterling is worth more francs in Paris than in London, it is better to use the Paris rate, and the agent or creditor in France should be asked to draw on London.

Example 16.

London on Monte Video short rate = 47½ pence per dollar.
 Monte Video on London long rate = 48 " "
 Discount in London 5 %, Monte Video 6 %.

Which is the better rate for returns from Monte Video, and how should payment be obtained?

Solution :—

Monte Video on London long rate..	..	=	48
3 mos. interest at 5 %	..	=	·6
Stamp and risk at 1 per mille ..	..	=	·048
			·648
Short rate on London	..	=	47·35
London short rate	..	=	47·50

England has a higher sterling rate, so a London creditor should draw on Monte Video, thereby obtaining more pence.

Example 17.

The following rates are quoted on a given date:—

London cheque rate on Paris 124·20; Rate in Paris for three months prime bankers' bills on London 122·85.

London T.T. rate on Buenos Aires 47½d.; Buenos Aires 90-day sight rate on London 48½d.

If interest in London is allowed at 4 %, find the best rates for remittances and returns (a) between London and Paris; (b) between London and Buenos Aires. Allow ½ per mille for English stamps, but neglect all other charges.

Solution :—

REDUCTION TO SIMILAR RATES:—

London cheque rate on Paris	124·20
Paris on London, 3 months	122·85
Add interest at 4 %	1·23
„ stamp, $\frac{1}{2}$ per mille	·06
Cheque rate (approx.)	<u>124·14</u>
London T.T. rate on Buenos Aires	47 $\frac{1}{2}$
Buenos Aires on London, 90 days' sight	48·25
Less interest at 4 % for, say, 104	
days (London terms)	·55
„ Stamp duty	·024
	<u>·574</u>
T.T. rate (approx.)	<u>47·676</u>
Say, 47 $\frac{1}{2}$ d.	

APPLYING THE FOREGOING RULES to these rates, we see that—

For Remittances.—London the debtor :—

- (1) London has the higher currency rate, therefore it is best to buy francs in London. Fcs. 10,000 will cost less at 124·20 than at 124·14 per £1.
- (2) London has a lower sterling rate, therefore it is best to buy pesos in London. Payment of a debt in pesos costs less at 47 $\frac{1}{2}$ pence than at 47 $\frac{1}{2}$ pence.

For Returns.—London the creditor :—

- (1) London has a higher currency rate, therefore it is best to buy sterling in Paris. It costs a Frenchman less francs to pay £1,000 in London at 124·14 than at 124·20.
- (2) London has a lower sterling rate, therefore it is best to buy sterling in Buenos Aires. It costs fewer pesos to pay a debt of £1,000 at 47 $\frac{1}{2}$ d. than at 47 $\frac{1}{2}$ d. per peso.

Choice of Rates for Covering Operations.—The principles which have been explained above in relation to the choice of rates are applied by an exchange dealer to the whole of his operations. Whenever he has reason to buy or sell a given currency he compares the rates ruling in his own centre with those ruling in other centres, and he carries out the operation through that centre which quotes the most favourable rates.

Example 18.—In the *Morning Post* of 2nd November, 1932, the following quotations appeared in the table of New York Exchange Rates :—

Buenos Aires on New York Gold ..	171·00 (i.e., 171 gold pesos per \$100).
New York on Buenos Aires Paper ..	25·75 (i.e., 25·75 cents per paper peso).

A New York operator wishes to buy \$oro 100,000 (i.e., 100,000 gold pesos) T.T. Buenos Aires. Is it better for him to do the deal in New York or Buenos Aires?

Solution :—

The first rate is equivalent to $\frac{100}{1·71}$ 58·4795 cents per gold peso.

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The second rate is equivalent to $\frac{25.75}{.44} = 58.5227$ cents per gold peso.

It will therefore be better for the operator to do the deal in Buenos Aires.

Cheque against T.T.—Sometimes a dealer in London can take advantage of the spread between T.T. and cheque rates in order to make use of his sterling funds for the mailing period. For instance, he may cable to his agent in New York: "Against spot buy £100,000 cheque London *Mauretania*", meaning that the agent is to buy a cheque on London for £100,000 and to remit it on the *Mauretania* (which sails that day). At the same time the agent is to sell a T.T. on London for £100,000. Thus, the London banker will be out of funds in London for the period which must elapse before the cheque arrives. He will, however, gain the interest represented by the margin between cheque and T.T. rates.

Thus, if his agent answers: "Bought £100,000 cheque 5.0112 against 5.0143", this means that the cheque was bought at 5.01 $\frac{1}{8}$ and T.T. was sold at 5.01 $\frac{7}{16}$.

Thus the banker gains $\frac{5}{16}$ c. on each £1, or $\frac{5}{16}$ c. on \$5.01 $\frac{1}{8}$, equivalent to:—

$$\frac{5}{16} \times \frac{100}{501.125} \%$$

Since the cheque will be presented in eight days, the gain is

$$\frac{5}{16} \times \frac{365}{8} \times \frac{100}{501.125} \% \text{ per annum.}$$

$$\text{Say, } \underline{\underline{2\frac{27}{32} \% \text{ per annum.}}}$$

A similar operation can be effected by selling cheque on New York against a purchase of T.T. In this case the London banker obtains the use of *dollars* at the cost of the spread between the two rates.

CHAPTER XXIX

ARBITRAGE

SOME of the characteristics of modern arbitrage in exchange have been explained in Chapter VI. As is there pointed out, the close inter-communication between the various financial centres tends to reduce the opportunities for profitable arbitrage to a minimum. The relative values of the world's most important currencies tend to equality in all the leading centres, and any disparity is so quickly noticed and taken advantage of that it almost immediately disappears. Naturally, this tendency is less marked between centres which are so far apart that cable messages take some hours to reach their destination. The distance between London and Kobe is so great that appreciable differences might arise in their respective rates on each other were it not that New York, which has much the best market in Japanese yen, is largely used as an intermediary. Again, the difference in time between some centres makes it possible for the rate in one centre to continue moving after the other centre is closed, with the effect of restricting the number of hours during which arbitrage can be effected.

Joint Operations.—Whilst the majority of arbitrage deals are “nostro” operations, i.e., transactions worked independently for its own profit by the house instituting the business, a considerable number are conducted as “joint ventures”, i.e., on joint account between the two houses concerned, which share expenses and divide profits or losses, as the case may be. The transactions in such circumstances are usually passed over the *vostro* accounts of the two participants, and, as a rule, no commission is charged or allowed for the actual conduct of the dealings. In most cases, joint operations are initiated when one of the parties, who sees a likely source of profit in a given transaction, instructs the other dealer by telephone or cable to buy or to sell a specified amount of a given currency on joint account.

By way of illustration, we may suppose that dollars are quoted in London at $4.86\frac{1}{4}-\frac{3}{4}$, and that the dealer in Lloyds Bank receives advice from New York that sterling is being quoted there at $4.85\frac{1}{4}-.86\frac{1}{4}$.

Seeing a chance of making a profit from a direct arbitrage between the two centres, he buys T.T. 250,000 on New York in London at, say, $4.86\frac{1}{4}$, and cables his New York correspondent to cover by buying sterling at best or at a limit, e.g., "Buy joint stling 50000 best" or "Limit 48612 buy joint stling 50000". On executing the order, the New York dealer cables "Boght fftho 48612 joint", specifying the rate which he was able to obtain.

Alternatively, the London dealer may make a profit on dollars by cabling his correspondent in that centre somewhat as follows: "*Best posel fftho joint*", i.e., "At the best rate obtainable, sell \$50,000 on our joint account". In due course, New York will cable, say, "*Sldjt fftho 48612*", and, on receipt of the message, the London dealer will cover by purchasing dollar T.T. at the best rate obtainable in London, say, $4.86\frac{1}{4}$, immediately advising his correspondent of the fact so that the latter will know how the transaction has worked out.

In due course, the equivalents in dollars and sterling pass to the respective vostro accounts, and the deals are confirmed by mail, showing a joint profit of $\frac{1}{4}$ cent in the rate divisible between the two parties, less any expenses, brokerage, etc., incurred.

It will be seen that direct arbitrage is based on the same principles as were explained in the last chapter in connection with the choice of rates for drawings and remittances. The dealer keeps a close watch on rates in foreign centres as well as on those in his own centre, and, whatever deal he contemplates, whether a simple arbitrage, a covering operation or a transfer of his funds for investment, he will always carry out each operation in that centre where he can get the most favourable rate.

Indirect Arbitrage.—At the present time the possibilities of profit from such direct arbitrage are at a minimum, and dealers find greater opportunity in *indirect* operations. Naturally, no dealer will exchange one currency direct for another if he can more profitably effect the transfer by an *indirect exchange*, i.e., by making use of one or more intermediate currencies in order to effect the ultimate conversion. Such arbitrations in exchange are termed *simple* or *compound* according as there is one intervening currency or more than one, and, as was explained in Chapter VI, the rate of exchange calculated between two currencies by reference to their respective values in terms of a third currency is called a simple "arbitrated parity" or a simple "arbitrated rate" between the two currencies. If more than three currencies are involved, the calculated rate is known as a *compound arbitrated rate*.

Suppose, for example, that a London dealer wishes to transfer Fcs. 1,000,000 to Paris, either to meet maturing obligations or to take advantage of a high interest level in that centre. His close touch with the London Foreign Exchange Market will keep him well apprised of the tendency of francs in terms of sterling, whilst his morning mail from Continental correspondents and his subsequent telephone and telegraphic communications to and from them will keep him informed of the tendency of francs in the European markets. Hence he will determine how the *direct* rate of exchange London on Paris compares with the sterling cost of francs bought with florins in Amsterdam, marks in Berlin, lire in Milan, and so on. In other words, he will compare the direct rate on Paris with the *simple arbitrated rate* between London and Paris, calculated by reference to the direct rate between sterling and each of the principal European currencies and the *cross rate* between each of those currencies and the franc. Having made his calculations he will use that rate, direct or indirect, which yields him most francs per £1.

Tables of Equivalent Rates.-- These are tables of varying rates of exchange between certain currencies compiled with the object of enabling the dealer to say almost at a glance what rate is established between two currencies by the intervention of a third currency at a given rate. The following simple example illustrates the method of compiling such a table for determining the equivalent rate between London and Paris when the London T.T. rate on Amsterdam is known and also the cheque rate on Amsterdam in Paris:---

EQUIVALENT RATES.

LONDON, PARIS AND AMSTERDAM.

Rate for T.T. Amsterdam, in Paris.	Rates for Paris, given T.T. rate London on Amsterdam.					
	12-08	12-09	12-10	12-11	12-12	12-13
1026	123-94	124-043	124-146	124-249	124-351	124-454
1026-25	123-971	124-074	124-176	124-279	124-381	124-484
1026-50	124-001	124-104	124-207	124-309	124-412	124-514
1026-75	124-031	124-134	124-237	124-339	124-442	124-544
1027	124-061	124-164	124-267	124-37	124-473	124-575
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Suppose, for example, that when the London T.T. rates on Amsterdam are 12·08-·10, a London dealer is advised that T.T. Amsterdam can be sold in Paris at 1026. On reference to the table, the dealer finds that the equivalent rate for francs is 123·94. Hence, if he is a buyer of francs, and cannot get them in London at such a good rate as this, e.g., if the London rates are 123·93-·95, he may buy T.T. on Amsterdam at 12·08 and instruct his agent in Paris to sell florins at 1026. In using the table, the dealer must, of course, be most careful to allow for any necessary brokerages and expenses involved in the indirect exchange.

These tables are of considerable utility in connection with instructions received by cable embodying orders to buy or to sell one currency against another at a given rate. Thus, a London dealer may receive a cable from New York:—

“ 391 Byspt Paris five milln.”

This rate means \$3·91 per 100 francs, and, in order to determine whether he can execute the order, the London operator uses his Loga calculator, or, for greater accuracy, his Madas machine, to find that the quotation of 3·91 is equivalent to the following London rates on Paris and New York respectively:—

124·00	and	4·8484,
124·01	„	4·848791,
124·02	„	4·849182,
124·03	„	4·849573,
124·04	„	4·849964,
or 124·05	„	4·850355.

If, therefore, he is to execute the American order and keep a margin of two centimes for his expenses and profit, he must be able to buy the francs at 124·03 and sell the dollars at 4·848791 (roughly 4·84 $\frac{7}{8}$) or at 124·05 and 4·849573 (roughly 4·84 $\frac{31}{32}$), and so on.

With such aids to the arithmetical processes involved in exchange dealing, the skill of the operator makes itself evident mainly in the speed with which he seizes upon a likely opportunity for profit, in the foresight or judgment which he displays in anticipating the course of rates in the immediate future, and in the care which he exercises in ensuring that proper allowance is made for all necessary expenses and charges. At the same time, it must be remembered that involved arbitrage operations are not possible unless the house concerned is of

good credit and can deal freely through a network of agents and correspondents in the principal financial centres.

Example 1.—You wish to buy \$50,000 against French francs. You are offered a rate of 25·43 francs per dollar from one quarter and 3·92 cents per franc from another. Which is the better rate from your point of view?

Solution:—

The reciprocal parity of 25·43 is $\frac{100}{25\cdot43} = 3\cdot93236$ cents per franc.

As this is a higher rate than 3·92, the rate of 25·43 is the better for buying dollars, since more dollars will be obtained for each franc.

Example 2.—If francs are quoted in London at 83 and U.S. dollars at 3·27, what would you expect the cross rate to be?

Solution:—

By Chain Rule—

$$\begin{array}{rcl} ? \text{ Fcs.} & \cdots & \$1 \\ \$3\cdot27 & \cdots & £1 \\ £1 & \cdots & \text{Fcs. } 83 \\ & & \text{Fcs. } \frac{83}{3\cdot27} \end{array}$$

∴ Expected cross rate Fcs. 25·38 per \$1.

Example 3.—Buy \$100,000 in Amsterdam at 2·49 and sell the dollars in London at 3·51½. Hence work out the profit when the London brokers can deal with your bank at 8·75½–76½ for T.T. Amsterdam.

Solution:—

\$100,000 at 2·49 cost Fls. 249,000

	£	s.	d.
Fls. 249,000 can be bought in London at 8·755, costing	28,440	17	10
\$100,000 @ 3·5125 realise	28,469	15	0
Profit (ignoring expenses)	<u>£28</u>	<u>17</u>	<u>2</u>

Example 4.—London quotes T.T. on Amsterdam at 12·11–12·11½, while in Paris, T.T. on Amsterdam sell at 1026. What indirect rate of exchange between London and Paris is established for buying francs, allowing brokerage at 1 per mille, and other expenses at 1 per mille?

Solution:—

To effect an indirect purchase of francs with the rates quoted, the London dealer must buy florins in London and sell them in Paris for francs; therefore—

$$\begin{array}{rcl} ? \text{ Fcs.} & = & £1 \\ £1 & = & 12\cdot11 \text{ florins (market selling} \\ & & \text{rate to the dealer)} \\ \text{Fls. } 100 & = & 1,026 \text{ francs} \\ & & 12\cdot11 \times 1026 \\ & = & \frac{\quad}{100} = \text{Fcs. } 124\cdot2486 \end{array}$$

Allow two brokerages @ 1 per mille and

other expenses @ 1 per mille 37275

Indirect rate via Amsterdam .. Fcs. 123·87585 per £1.

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Example 5.—On a given day the following market rates are quoted:—

IN LONDON.	
Paris	124·30-·35
Amsterdam	12·12- $\frac{1}{4}$
Berne	25·25- $\frac{1}{4}$
Berlin	20·43- $\frac{1}{4}$

IN PARIS.	
Amsterdam	Fcs. 1026-·25 per Fls. 100
Berne	„ 492·5-·75 per Fcs. 100
Berlin	„ 608-·50 per Mks. 100

Find the indirect rates between London and Paris at which a London dealer can operate by using each of these centres, and decide which is the best rate for (a) paying Paris, i.e., buying francs; (b) receiving from Paris, i.e., selling francs.

Allow for brokerage at $\frac{1}{16}$ per mille on each purchase or sale, and for other expenses at $\frac{1}{16}$ per mille on the indirect operations.

Solution.—

Buying Francs.

Market rate	124·300
Less brokerage, $\frac{1}{16}$ per mille	·012
	124·288

Selling Francs.

Direct Rates.

Market rate	124·350
Add brokerage, $\frac{1}{16}$ per mille	·012
	124·362

Amsterdam.

? Fcs. = £1
£1 = 12·12 florins
(buying)

Fls. 100 = 1,026
(selling)

$$\therefore \frac{12 \cdot 12 \times 1026}{100}$$

= Fcs. 124·351

Less two brokerages @
 $\frac{1}{16}$ per mille and ex-
penses $\frac{1}{16}$ per mille ·037
Fcs. 124·314

? Fcs. = £1
£1 = 12·125 florins
(selling)

Fls. 100 = 1026·25
(buying)

$$\therefore \frac{12 \cdot 125 \times 1026 \cdot 25}{100}$$

= Fcs. 124·433

Add two brokerages @
 $\frac{1}{16}$ per mille and ex-
penses $\frac{1}{16}$ per mille ·037
Fcs. 124·470

Berne.

? Fcs. = £1
£1 = 25·25 Swiss Fcs.
(buying)

Sw. Fcs. 100 = 492·5 French Fcs.
(selling)

$$\therefore \frac{25 \cdot 25 \times 492 \cdot 5}{100}$$

= Fcs. 124·356

Less brokerages, etc., as
above ·037
Fcs. 124·319

? Fcs. = £1
£1 = 25·2525 Swiss Fcs.
(selling)

Sw. Fcs. 100 = 492·75 French Fcs.
(buying)

$$\therefore \frac{25 \cdot 2525 \times 492 \cdot 75}{100}$$

= Fcs. 124·432

Add brokerages, etc., as
above ·037
Fcs. 124·469

Berlin.

? Fcs. = £1	
£1 = 20.43 Mks.	
(buying)	
Mks. 100 = 608 Fcs.	
(selling)	
$\therefore \frac{20.43 \times 608}{100}$	
= Fcs. 124.214	
Less brokerages, etc. ..	.037
Fcs. <u>124.177</u>	

? Fcs. = £1	
£1 = 20.435 Mks.	
(selling)	
Mks. 100 = 608.5 Fcs.	
(buying)	
$\therefore \frac{20.435 \times 608.5}{100}$	
= Fcs. 124.347	
Add brokerages, etc. ..	.037
Fcs. <u>124.384</u>	

COMPARISON OF RATES:

	Buying.	Selling.
Direct	£1 = Fcs. 124.288	£1 = Fcs. 124.362
By using Amsterdam	£1 = „ 124.314	£1 = „ 124.470
„ Berne	£1 = „ 124.319	£1 = „ 124.469
„ Berlin	£1 = „ 124.177	£1 = „ 124.384

The best rate for *buying* French currency or paying France is the one that yields the largest number of francs per £1. This is shown to be the indirect rate obtained by purchasing Swiss francs and selling them for francs, i.e., the indirect rate *via* Berne. The best rate for *selling* French currency, or receiving payment from France, is the one that yields the highest amount in sterling, i.e., the direct rate, London on Paris.

So for (a) *Remittances*, the indirect rate *via* Berne, 124.319, is best.

(b) *Returns*, the direct rate on Paris, 124.362, is best.

Example 6.—A London exchange dealer purchases 100,000 T.T. Madrid in New York at \$14.60 per 100 pesetas and sells them in London at 33.25 to the £1. He covers his dollars against sterling at 4.86½. What profit or loss does he make on the transaction?

Solution:—

T.T. New York on Madrid costs \$14.60 per 100 pesetas.

The cost in New York of 100,000 Madrid is \$1,000 × 14.60 = \$14,600.

$$\therefore \text{Cost in sterling} = \frac{\text{£14,600}}{4.86\frac{1}{2}} = 2,999 \ 9 \ 9$$

$$\text{Proceeds of sale of 100,000 Madrid at 33.25} = \frac{100,000}{33.25} = 3,007 \ 10 \ 5$$

$$\therefore \text{Profit on the transaction} = \underline{\text{£8} \ 0 \ 8} \text{ exclusive of brokerage and cablegrams.}$$

Example 7.—A London arbitrageur purchases a T.T. on Prague for one million kronen against dollars at Kr. 33.925 per \$1. He sells the kronen in London at 165 and covers the dollars at 4.86½. What profit or loss does he make on the transaction?

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Solution:—

Dollar cost of Kr. 1,000,000 at 33·925 = \$29,476·78

	£	s.	d.
\$29,476·78 @ 4·86½ cost	6,058	19	0
Kr. 1,000,000 @ 165 realise	6,060	12	1
Profit, excluding expenses	<u>£1</u>	<u>13</u>	<u>1</u>

Example 8.—T.T. Kobe is quoted in New York at 21·96–·99 (cents per yen), while the current quotation in London is 1s. 3½–1s. 4½d.

- (a) Assuming that a London banker can obtain exchange at these prices, which is the better market for a purchase of 250,000 yen when brokers tell the dealer they are firm at 3·29½ for the dollar?
- (b) Calculate the cost of the yen in accordance with your decision.

Solution:—

- (a) The banker has two alternatives:—

- (1) He can purchase the yen in London at 1s. 4½ = 16·0625d.
 (2) He can purchase the yen in New York at an indirect rate of $\frac{240 \times \cdot 2199}{3 \cdot 29125}$ d. = 16·035245d. per yen.

He will therefore choose the indirect rate via New York, which is the cheaper.

- (b) The cost of the yen will be

$$\text{£} \frac{250,000 \times 16 \cdot 035245}{240} = \underline{\underline{\text{£}16,703 \text{ 7s. 7d.}}}$$

Example 9.—In Paris there are dealers in Swedish kronor at 437½-9 (francs per Kr. 100), and sterling is quoted at 83·55–·78. A French banker, who can cover at the prices quoted, telephones to London asking his English correspondent to make him a dealing price in Stockholm. The London banker quotes him firm at 19½–19½. Can the French banker deal on this call?

Solution:—

Two courses are open to the French banker: (a) He can buy kronor from the London banker and sell these against francs, or (b) He can sell kronor to the London banker, buying direct cover in Paris.

- (a) *By Chain Rule—*

$$\begin{aligned} & \text{? Fcs.} \quad \dots 100 \text{ kronor} \\ & \text{if Kr. } 19 \cdot 0625 = \text{£1} \\ & \text{and £1} = \text{Fcs. } 83 \cdot 78 \\ & \frac{8378}{19 \cdot 0625} = \underline{\underline{\text{Fcs. } 439 \cdot 5016}} \end{aligned}$$

∴ It will not pay the French banker to buy kronor in London, for each 100 kronor, which would cost him over 439½ francs *via* London, would realise only 437½ francs by a direct sale in Paris.

- (b) *By Chain Rule.*

$$\begin{aligned} & \text{? Fcs.} \quad \dots \text{Kr. } 100 \\ & \text{If Kr. } 19 \cdot 1875 = \text{£1} \\ & \text{and £1} = \text{£83} \cdot 55 \\ & \frac{8355}{19 \cdot 1875} = \underline{\underline{\text{Fcs. } 435 \cdot 5}} \end{aligned}$$

∴ It will not pay the French banker to sell kronor to London, as a direct purchase would cost him Fcs. 439 per Kr. 100, and would realise only Fcs. 435½.

The French banker cannot, therefore, deal on this call.

Example 10.—New York offers Paris at $3.93\frac{1}{2}$ (i.e., dollars per Fcs. 100), while in Paris dollars are offered for 25.44. A London dealer hears from his brokers that the market here is $3.28\frac{1}{2}$ and $83\frac{1}{2}$ for the currencies concerned. Can the London banker take advantage of these offers in any way?

Solution:—

- (1) Assuming the banker buys the francs in New York, he will obtain 100 francs for an expenditure of $3.93\frac{1}{2}$ dollars, and these dollars he will have to buy in London at 3.28 .

Hence, by Chain Rule—

$$\begin{aligned} ? \text{ How many francs} &= \text{£1} \\ &\text{if £1} = \$3.28 \\ &\text{and } \$3.93125 = 100 \text{ francs} \\ \frac{1 \times 3.28 \times 100}{1 \times 3.93125} &= \underline{\text{Fcs. } 83.40} \end{aligned}$$

As he cannot sell francs in London at a better price than 83.50 per £1, it will not pay him to buy francs in New York.

- (2) Ascertain whether or not a cross-transaction between the two offers will pay (i.e., buying the francs in New York and selling them in Paris for dollars).

In Paris, Fcs. 25.44 are wanted for a dollar.

∴ Fcs. 100 will buy

$$\frac{100}{25.44} = \underline{\$3.9307}$$

As this will not be sufficient to buy Fcs. 100 in New York (where $3.93\frac{1}{2}$ are asked) no cross-transaction will pay.

- (3) Assuming the London dealer buys New York in Paris—

$$\begin{aligned} \text{Then: How many } \$ & \quad \text{£1} \\ & \text{if £1} \quad \text{Fcs. } 83\frac{1}{2} \text{ (his buying price in London)} \\ \text{and Fcs. } 25.44 & \quad \$1 \\ & \quad \quad \quad \begin{array}{r} 8325 \\ 2544 \end{array} \quad \underline{\$3.272} \end{aligned}$$

But as the dealer cannot sell dollars in London at a better rate than $3.28\frac{1}{2}$, he cannot afford to buy dollars in Paris.

Example 11.—A dealer has oversold his U.S. dollar position and, in seeking to cover it, he enquires of his broker the market rates for dollars, which are:—

New York	..	$3.26\frac{1}{2}-\frac{1}{2}$
Montreal	..	$3.58\frac{1}{2}-\frac{1}{2}$

He now receives a cable from his Canadian correspondent:—

“ OFFER YOU NEW YORK $9\frac{1}{2}$ PREMIUM RUSH ”

How will he act? Ascertain the cost of \$100,000 U.S. in accordance with his decision.

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Solution:—

He can buy the U.S. dollars in London at 3·26 $\frac{1}{4}$,

or

He can buy them in Canada, receiving 100 U.S. dollars for 109 $\frac{3}{4}$ Canadian dollars. He will then have to cover by buying Canadian dollars in London at 3·58 $\frac{1}{4}$.

∴ By Chain Rule—

$$\begin{aligned}\text{How many U.S. \$} &= \text{£1} \\ \text{if £1} &= \$3\cdot58625 \text{ Can.} \\ \text{and \$109}\cdot75 \text{ Can.} &= \$100 \text{ U.S.} \\ \frac{358\cdot625}{109\cdot75} &= \underline{3\cdot2676}\end{aligned}$$

It will therefore be cheaper to buy the U.S. dollars through Canada, and, on the basis of this decision, \$100,000 will cost:—

$$\text{£} \frac{100,000}{3\cdot2676} = \underline{\underline{\text{£}30,603 \text{ 10s. 0d.}}}$$

Example 12.—A French banker sends the following cable to his London correspondent, an Eastern Exchange banker:—

“CAN YOU DEAL CALCUTTA 620-25 OUR TERMS COUNTER”

On receipt of this cable, the London banker is prepared to deal in rupees at 1/6 $\frac{1}{2}$ —1 $\frac{1}{2}$. The market quotation on Paris is 82·25—30. Ignoring brokerage, etc., ascertain whether the London banker can take advantage of the French banker's dealing prices.

Solution:—

The cable may be construed to mean: “Can you buy from me rupees at Fcs. 6·25 each, or sell me rupees at Fcs. 6·20? If not, make counter offer.”

If the London banker is to sell rupees for francs and sell the francs in London at 82·30, his rate may be calculated thus:—

$$\begin{aligned}\text{? How many francs} &= 1 \text{ rupee} \\ \text{if 1 rupee} &= 18\cdot3125\text{d. (1/6}\frac{1}{2}\text{.)} \\ \text{and 240 pence} &= 82\cdot30 \text{ Fcs.} \\ \frac{18\cdot3125 \times 82\cdot30}{240} &= \underline{\underline{\text{Fcs. 6}\cdot28}}\end{aligned}$$

Since the Paris banker offers only Fcs. 6·20 per rupee, the London banker cannot sell without loss.

If the London banker is to buy rupees for francs, obtaining the francs in London at 82·25, his rate may be calculated thus:—

$$\begin{aligned}\text{? How many francs} &= 1 \text{ rupee} \\ \text{if 1 rupee} &= 18\cdot1875\text{d. (1/6}\frac{1}{4}\text{.)} \\ \text{and 240 pence} &= 82\cdot25 \text{ Fcs.} \\ \frac{18\cdot1875 \times 82\cdot25}{240} &= \underline{\underline{\text{Fcs. 6}\cdot23}}\end{aligned}$$

Since the Paris banker requires 6·25 francs per rupee, the London banker cannot buy without loss.

The London banker can afford to sell at Fcs. 6·28 and to buy at Fcs. 6·23. Hence he could offer to deal at, say, Fcs. 6·22--·29 (his terms).

His reply would read:—

“ REGRET RUPEES DEALER 622-29 ”

Example 13.—A London banker has sold \$100,000 to a customer at 4·86, which he wishes to cover through Stockholm. He telegraphs to his Stockholm agent:—

“ BUY BEST ONE HUNDRED THOUSAND DOLLARS ”, and receives the reply—

“ BOUGHT ONE HUNDRED THOUSAND DOLLARS 3·725 ”

If he can purchase in London the kronor necessary to cover his purchase of dollars in Stockholm at 18·12, what is his profit or loss on the transaction? Ignore expenses.

Solution: -

The banker has sold \$100,000 at 4·86 for which he receives

£	s.	d.
$\frac{100,000}{4 \cdot 86}$	= 20,576	2 8

He purchases \$100,000 at Kr. 3·72½ per \$ which cost him
Kr. 372,500.

He covers the kronor at 18·12 at a total cost of £ $\frac{372,500}{18 \cdot 12}$ = 20,557 7 11

Therefore his profit on the transaction is £18 14 9

Example 14.—The dealers in a London bank are busy answering two telephone calls, one from Paris, where the French bank quotes dealing prices in Dutch florins of 1,030·50 to 1,031 (French francs per Fls. 100), and the other from Amsterdam quoting Paris at 9·70½-¾ (florins per Fcs. 100).

(a) These prices being “ firm ”, can the London bank make any profit in arbitrage using only these two centres?

(b) Ascertain the result of a deal utilising £10,000, if Paris can be bought in London at 84·62 and florins can be sold here at 8·21. In this case ignore entirely the quotations you have received from Paris. Expenses can be ignored.

Solution: -

(a) To compare the rates in Paris with those in Amsterdam it is necessary to bring them to a common basis, say, florins per 100 francs.

The rates in Paris may be converted as follows:—

$$\begin{aligned} 1030 \cdot 50 \text{ francs} &= 100 \text{ florins} \\ \therefore 100 \text{ francs} &= \frac{100 \times 100}{1030 \cdot 5} \text{ florins} \\ \text{i.e., } 9 \cdot 704 \text{ florins} &= 100 \text{ francs.} \end{aligned}$$

$$\begin{aligned} 1031 \text{ francs} &= 100 \text{ florins} \\ \therefore 100 \text{ francs} &= \frac{100 \times 100}{1031} \text{ florins} \\ \text{i.e., } 9 \cdot 699 \text{ florins} &= 100 \text{ francs.} \end{aligned}$$

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The rates in Paris are therefore Fls. 9·699--·704 per 100 francs, and the rates in Amsterdam are Fls. 9·705--·7075 per 100 francs.

(i) Francs can be bought in Amsterdam at 9·7075 and sold in Paris at 9·699.
This is obviously unprofitable.

(ii) Francs can be bought in Paris at 9·704 and sold in Amsterdam at 9·705.
This yields a profit (ignoring expenses).

(b) Purchase of francs @ 84·62 for £10,000 = Fcs. 846,200.

Sale of francs in Holland @ 9·70½ per 100 realises

$$\frac{846,200}{100} \times 9.705 = \text{Fls. } 82,123.71$$

Sale of florins in London @ 8·21 realises

$$\text{£} \frac{82,123.71}{8.21} = \text{£}10,002 \text{ } 17\text{s. } 9\text{d.}$$

This shows a profit of £2 17s. 9d. (ignoring expenses).

Example 15.—An arbitrageur in London purchases a T.T. on Prague for one million kronen against dollars at Kr. 33·745 per \$1. He sells the kronen in London at 164½ and covers the dollars at 4·87½. What profit or loss does he make on the transaction?

Solution:—

The cost in dollars of T.T. on Prague for

$$\text{Kr. } 1,000,000 = \$ \frac{1,000,000}{33.745} = \$29,634.02$$

The cost in sterling is therefore

$$\text{£} \frac{29,634.02}{4.87\frac{1}{2}} = \text{£} 6,074 \text{ } 2 \text{ } 0$$

The proceeds of the sale of one million Prague @ 164½

$$= \text{£} \frac{1,000,000}{164.5} = \text{£} 6,079 \text{ } 0 \text{ } 7$$

His profit (less brokerage and cables) is therefore £4 18 7

Example 16.—You hear from New York that the Argentine peso is quoted there at \$35·45--·55 (per M\$N 100). The London quotations are 43½-44, while brokers quote New York at 4·51½-·52½. Ascertain whether, if you can take advantage of these prices, you can deal at a profit.

Solution:—

The London rates are for gold pesos.

Reducing these quotations to paper rates:—

$$\frac{43\frac{1}{2} \times 44}{100} = 19.14\text{d.}$$

$$\frac{44 \times 44}{100} = 19.36\text{d.}$$

(a) If pesos are bought in London and sold in New York, £1 will realise:—

? How many \$ = £1

if £1 = 240 pence

19.36d. = 1 peso

100 pesos = \$35.45

∴ £1 = \$4.39462

But as dollars can only be sold in London at a higher rate (\$4.52½ = £1), the operation is not profitable.

(b) If dollars are bought in London and are used to purchase pesos in New York, each peso will cost:—

$$\begin{aligned} ? \text{ How many pence} &= 1 \text{ peso} \\ \text{if } 100 \text{ pesos} &= \$35.55 \\ \$4.51\frac{1}{2} &= £1 \\ £1 &= 240 \text{ pence} \\ \therefore 1 \text{ peso} &= \underline{18.886d.} \end{aligned}$$

Since pesos can be sold in London at 19.14 pence, *this operation will be profitable.*

Example 17.—You receive the following cable from a New York bank:—

"BUYERS HUNTHOU ZURICH 25815 OUR TERMS"

In London, brokers are quoting Swiss francs at 18.11- $\frac{1}{2}$ and dollars at 4.67 $\frac{1}{2}$ - $\frac{1}{2}$. The London banker can reckon on brokerages of $\frac{1}{4}$ th per mille and $\frac{1}{16}$ th per mille respectively.

- (a) How would you ascertain quickly whether you can accept the order?
- (b) Show profit or loss if you execute it, allowing *actual* brokerages of 12s. 6d. on the Zurich and 8s. 6d. on the dollars.

Solution:—

(a) To ascertain quickly whether the offer can be accepted it is necessary to ascertain the cross rate obtained by selling dollars and buying Swiss francs.

The rates are: Sale of dollars, 4.67 $\frac{1}{2}$.
Purchase of francs, 18.11.

$$\begin{aligned} ? \text{ How many } \$ &= 100 \text{ Swiss francs} \\ \text{if Fcs. } 18.11 &= £1 \\ \text{and } £1 &= \$4.67\frac{1}{2} \\ &= \frac{4.67375 \times 100}{18.11} \\ &= \$25.8076 \\ \text{Add Charges, } \frac{1}{16} \text{ per mille} &= .0048 \\ &= \underline{\$25.8124} \end{aligned}$$

$\therefore$ The cross-rate is \$25.8124 = Fcs. 100, i.e., Fcs. 100 will "cost" the dealer \$25.8124.

Hence the offer from New York of \$25.815 is acceptable.

(b) Proceeds of Sw. Fcs. 100,000 at \$25.815

$$\begin{aligned} &= \frac{25.815 \times 100,000}{100} \\ &= \$25,815 \end{aligned}$$

	£	s.	d.
Sale of \$25,815 @ 4.67 $\frac{1}{2}$ realises	5,523	8	0
Cost of Fcs. 100,000 @ Fcs. 18.11	5,521	16	3
Profit	£1	11	9
Delect Brokerages	1	1	0
Net Profit	10	9	

Compound Arbitrage.—If time allows and rates are sufficiently steady, a dealer who wishes to transfer a considerable sum from one centre to another may examine the position of the various exchanges.

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with still greater care in order to determine whether he can profitably transfer the funds by making the exchange through two, or even more, currencies, i.e., by executing what is known as a *compound arbitrage*.

Compound arbitrage is sometimes described as *four- or five-point arbitrage*, according to the number of currencies or places involved, but, as the charges on such complicated operations increase with each intervening centre, they are nowadays very rarely undertaken.

The following examples are largely hypothetical, but they should serve to illustrate the principles involved and afford useful theoretical practice in the application of exchange rates in different centres. In all cases, the calculations are made by the Chain Rule, as in previous examples. The question of expenses and charges is necessarily of great importance, and, in circuitous operations, allowance must in certain circumstances be made for interest on the money invested for the time of the operation.

Example 18.—London and Madrid.

A London dealer buys T.T. on Paris at 124·15, the francs being used to buy T.T. on Berlin at 607. The proceeds are applied in purchase of T.T. on Amsterdam at 166·60. With the florins so obtained the dealer buys pesetas at 40·69. Find the compound arbitrated rate between London and Madrid, allowing for brokerage on each operation at 1 per mille and for a commission of $\frac{1}{2}\%$ on each of the deals in foreign centres.

Solution:—

$$\begin{array}{rcl}
 ? \text{ Pesetas} & = & \text{£1} \\
 \text{£1} & = & 124\cdot15 \text{ francs} \\
 \text{Fcs. 607} & = & 100 \text{ marks} \\
 \text{Mks. 166}\cdot60 & = & 100 \text{ florins} \\
 \text{Fls. 40}\cdot69 & = & 100 \text{ pesetas} \\
 \hline
 \frac{124\cdot15 \times 100 \times 100 \times 100}{607 \times 166\cdot60 \times 40\cdot69} & = & \text{Pesetas } 30\cdot1713
 \end{array}$$

Deduct Charges.

$$\begin{array}{rcl}
 4 \text{ Brokerages @ } 1 \text{ per mille} & \dots & \cdot1207 \\
 3 \text{ Commissions @ } \frac{1}{2}\% & \dots & \cdot0566 \\
 & & \hline
 & & \cdot1773 \\
 & & \hline
 & & 29\cdot994
 \end{array}$$

Compound arbitrated rate = Pesetas 29·994 per £1.

Example 19.—London and Berne.

A London dealer is under the necessity of making a large remittance to Switzerland, and, being in close touch with his Continental agents as well as with his own market, he is quoted the following rates:—

London on Berlin, Mks. 20·41 $\frac{1}{4}$ —·42 per £1.
 Berlin on Paris, Mks. 16·325—·425 per 100 francs.
 Paris on Berne, Fcs. 491·5—492·5 per 100 Swiss francs.

Solution:—

1 Swiss Fcs. = £1
 £1 = 20.415 marks
 Mks. 16.425 = 100 French francs
 French Fcs. 492.5 = 100 Swiss francs

$$\frac{20.415 \times 100 \times 100}{16.425 \times 492.5} = \text{Fcs. } 25.237 \text{ per } \text{£}1.$$

3 Brokerages @ 1 per mille	..	·0757	
2 Commissions @ 1½ %	..	·0315	
		<u> </u>	·107
Compound arbitrated rate	=	Fcs. 25·130	per £1.

By circuitous operations it is sometimes possible to make profits by a series of exchanges without employing any capital whatsoever. But operations of this kind are nowadays rarely executed, for one thing because the opportunities of making profit are few and far between, and, for another, because the dealers have little time to work out complicated operations before one or other of the rates may change unfavourably and so minimise the chances of profit. The following are illustrative examples.

A New York banker invests \$500,000 in marks at 23·69, with which he buys francs at 16·42. The proceeds are applied in the purchase of sterling at 123·95. The sterling is used to buy T.T. on New York at 4·85½. What is the gross profit or loss on the operation?

?	\$	=	\$500,000
\$23.69		=	100 marks
Mks. 16.42		=	100 francs
Fcs. 123.95		=	£1
	£1	=	\$4.855
500,000	×	100	×
23.69	×	16.42	×
123.95			
			= \$503,471.04
Gross Profit	=		\$3,471.04

£10,000 is invested in London in T.T. on Berlin at 20.43. The marks are sold in Paris at 609. The proceeds are used to buy lire at 133, which are sold in

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New York at 5·23½. With the proceeds T.T. on London is bought at 4·85. What is the profit on the transaction? Allow for brokerages of 1 per mille on each operation.

Solution:—

$$\begin{aligned}
 & \text{? £} = \text{£10,000} \\
 & \text{£1} = \text{Mks. 20·43} \\
 & \text{Mks. 100} = \text{Fcs. 609} \\
 & \text{Fcs. 133} = \text{Lire 100} \\
 & \text{Lire 100} = \$5·2325 \\
 & \$4·85 = \text{£1} \\
 & = \frac{\text{£10,000} \times 20·43 \times 609 \times 100 \times 5·2325}{100 \times 133 \times 100 \times 4·85} \\
 & \qquad \qquad \qquad = \text{£10,092·564} \\
 & \text{Less 5 Brokerages @ 1 per mille} \quad \dots = \quad \text{50·463} \\
 & \qquad \qquad \qquad \text{£10,042·101} \\
 & \therefore \text{Net profit} = \underline{\text{£42} \quad \text{2s. 0d.}}
 \end{aligned}$$

Example 22.—Circuitous Operation.

£10,000 is invested in T.T. on Berne at 25·29, the francs being sold in Amsterdam at 48·22. The proceeds are used to buy sterling at 12·10. Find the profit or loss on the operation, allowing brokerage 1 per mille on each transaction.

Solution:—

$$\begin{aligned}
 & \text{? £} = \text{£10,000} \\
 & \text{£1} = \text{Fcs. 25·29} \\
 & \text{Fcs. 100} = \text{Fls. 48·22} \\
 & \text{Fls. 12·10} = \text{£1} \\
 & = \frac{\text{£10,000} \times 25·29 \times 48·22}{100 \times 12·1} \\
 & \qquad \qquad \qquad = \text{£10,078·378} \\
 & \text{Less 3 Brokerages @ 1 per mille} \quad \dots = \quad \text{30·235} \\
 & \qquad \qquad \text{Proceeds} \quad \dots = \underline{\text{£10,048·143}} \\
 & \text{Net profit} = \underline{\text{£48} \quad \text{2s. 10d.}}
 \end{aligned}$$

The above example worked in full appears as follows:—

£10,000 invested in francs @ 25·29, buys	..	..	..	Fcs. 252,900
Less Brokerage in London, 1 per mille	..	..	..	252·9
				<u>252,647·1</u>
Fcs. 252,647·1 sold in Amsterdam @ 48·22 realise	..	..	..	Fls. 121,826·43
Less Brokerage in Amsterdam, 1 per mille	..	..	..	121·83
				<u>121,704·60</u>
Fls. 121,704·6 invested in sterling @ 12·10 buys	..	..	..	£10,058·231
Less Brokerage in Amsterdam, 1 per mille	..	..	..	10·058
Amount received in London	..	..	..	<u>£10,048·173</u>

The slight difference is accounted for by the fact that, in the first method, the three brokerages are calculated on the final proceeds, whereas, in the second method, brokerage in the last two cases is calculated on the proceeds less one and two brokerages respectively. The second is, of course, the more accurate method and should strictly be adopted in answering any problems of this type.

CHAPTER XXX

EXCHANGE OPERATIONS INVOLVING FORWARD RATES

THE principles involved in calculations connected with the purchase and sale of forward currency are precisely the same as those which apply to dealings in spot currency, subject, however, to the fact that the dealer who is carrying out a forward transaction, either on his own behalf or on behalf of his customer, must keep well before him not only the current market rates for the foreign currency in question, but also the relationship between the rates of interest ruling in the foreign centres concerned. This will be clear on a consideration of the following examples.

Example 1.—If money rates in New York are 1 % p.a. higher than in London, at what rate would you expect forward dollars for three months' delivery to be quoted in London as against a spot rate of $4\cdot86\frac{1}{2}$?

Solution :—

Since interest rates are 1 % higher in New York than in London, London forward rates on New York should be at a *discount* of approx. 1 % p.a. on the rate, i.e.:—

1 % per annum on \$4·8625	..	=	·048625
1 % per 3 months on \$4·8625	..	=	·012156

∴ London forward rate on New York = $1\frac{1}{2}$ c. discount per three months.

Example 2.—From the following data, calculate at what rate a banker, operating with £1,000, can sell American dollars three months' forward "outright": Dealer's spot rate, $4\cdot86\frac{1}{8}-\frac{1}{4}$; interest in London 5 %, in New York 4 %.

Solution :—

As interest rates in New York are 1 % *lower* than in London, the dealer will charge a *premium* on the sale of forward dollars, since by covering with a spot purchase of dollars he will lose interest at 1 % p.a.

Dealer's selling rate for spot	..	..	\$4·860625
(Assumed to allow for his profit)			
Premium on 3 months' forward dollars			
(3 months @ 1 % p.a.)	..	..	·012152
3 months' forward "outright" rate	..		<u>\$4·848473</u>
Say, $4\cdot84\frac{1}{4}$ d. per £1.			

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Example 3.—Given a spot rate of exchange, London on Paris, of $120\frac{1}{2}$, calculate the probable three months' forward rate of exchange. The rate of interest in London is 5 % and in Paris $7\frac{1}{2}$ %. Neglect other considerations.

Solution :—

Spot rate (London on Paris)	..	..	120·50 francs per £1.
London interest rate	..	..	5 % p.a.
Paris interest rate	..	..	$7\frac{1}{2}$ % p.a.

i.e., money earns $2\frac{1}{2}$ % more in Paris than in London.

∴ the forward rate, London on Paris, will probably be at a discount of $2\frac{1}{2}$ % p.a.

$2\frac{1}{2}$ % p.a. ..	..	..	..	..	$\frac{1}{4}$ % for 3 months.
T.T. rate ..	..	..	..	..	120·50
Add $\frac{1}{4}$ % ..	..	..	..	..	·753125
3 months' forward rate, London on Paris					<u>121·253125</u> francs per £1.

Say, 121 $\frac{1}{4}$ francs per £1.

i.e., forward francs are quoted at a discount of $\frac{1}{4}$ franc for three months.

Example 4.—If the market quotation in London for three months' forward dollars is $\frac{1}{2}$ c. premium on a spot rate of $4·86\frac{1}{2}$, and the value of three months' money in London is 5 %, what is the probable current rate for three months' money in New York?

Solution :—

As London three months' rate on New York is at a premium, the likelihood is that interest rates in the latter centre are lower than in the former.

Premium on $\$4·8675$ for 3 months is $\frac{1}{2}$ c.

∴ Premium on $\$4·8675$ for 12 months is 2·5 c.

$$\begin{aligned}
 &= \frac{·025 \times 100}{4·8675} \% \\
 &= \underline{·513 \%}.
 \end{aligned}$$

∴ The probability is that the current rate for three months' money in New York is about $\frac{1}{2}$ % under the London rate, i.e., about $4\frac{1}{2}$ % per annum.

Quoting Forward Rates.—In Chapter XI it was explained how a banker fixes his rates when quoting for forward transactions with his customer. As a general rule a London dealer bases his forward rates for “outright” deals with his customers on the assumption that he will cover by buying or selling spot in the Market and then effecting a swap. Hence the forward rates he quotes to his customers will be calculated in accordance with the following rules:—

(a) **FOR SELLING FORWARD TO CUSTOMERS:—**

- (1) Take as basis the market selling rate for spot.
- (2) If forward swaps are quoted at a premium, *deduct the premium* from the spot rate (for “pence” rates *add the premium*).
- (3) If forward swaps are quoted at a discount, *add the discount* (for “pence” rates *deduct it*).

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- (4) *Deduct* any necessary allowance for profit, etc. (for "pence" rates *add*).

(b) FOR BUYING FORWARD FROM CUSTOMERS:—

- (1) Take as basis the market buying rate for spot.
- (2) If forward swaps are quoted at a premium, *deduct the premium* from the spot rate (for "pence" rates *add* it).
- (3) If forward swaps are quoted at a discount, *add* the discount to the spot rate (for "pence" rates *deduct* it).
- (4) *Add* any necessary allowance for profit, etc. (for "pence" rates *deduct*).

Example 5.—What rate should a London dealer apply in the purchase of dollars "outright" for delivery two months ahead, if the market spot rate is $4\cdot86\frac{1}{16}$, and forward dollars are quoted $\frac{1}{8}$ cent discount per month? Reckon the dealer's profit at $\frac{1}{16}$ cent, and other expenses (including brokerage) at $\frac{1}{32}$ cent.

Solution :—

Market buying rate for spot	\$4·86 $\frac{1}{16}$.
Add 2 months' discount @ $\frac{1}{8}$ c.	$\frac{1}{8}$
Rate at which dealer can cover 2 months' forward ..	<u>4·86$\frac{1}{16}$</u>
Add Brokerage, etc.	$\frac{1}{32}$
Dealer's profit	$\frac{1}{16}$
Dealer's "outright" buying rate, 2 months' forward ..	<u>\$4·86$\frac{1}{16}$</u>

Example 6.—Rates, etc., as in the last example, calculate the rate which a dealer should apply in *selling* to a customer \$50,000 "outright", one month forward.

Solution :—

Market selling rate for spot	\$4·86 $\frac{1}{16}$.
Add 1 month's discount	$\frac{1}{8}$
Cost of covering for 1 month forward	<u>4·86$\frac{1}{16}$</u>
Less Brokerage, etc.	$\frac{1}{32}$
Dealer's profit	$\frac{1}{16}$
Dealer's "outright" selling rate, 1 month forward ..	<u>\$4·86$\frac{1}{16}$</u>

Example 7.—Japanese currency is quoted in London on a certain date at $2/0\frac{1}{2}-\frac{1}{2}$, and a dealer is offered 100,000 yen two months' forward "outright". With what sterling equivalent will he credit his customer if the forward rate on Japan is quoted at $\frac{1}{16}$ d. premium per month, and the dealer reckons his profit at $\frac{1}{16}$ d. in the rate?

Solution :—

Market buying rate for spot	24 $\frac{1}{2}$ d.
Add 2 months' premium @ $\frac{1}{16}$ d. per month	$\frac{1}{8}$ d.
Dealer covers 2 months' forward at	<u>24$\frac{1}{2}$ d.</u>
Less Dealer's Profit	$\frac{1}{16}$ d.
Rate to be applied to the purchase	<u>24$\frac{1}{2}$ d.</u>

$$\text{Sterling equivalent } \pounds \frac{100,000 \times 24\cdot46875}{240}$$

$$= \pounds 10,195 \text{ 6s. 3d.}$$

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Double-Barrelled Forward Quotations.—Commonly the calculation of forward rates is complicated by the fact that swaps are quoted at double-barrelled rates, e.g., 5–10 c. discount, or 10–5 c. premium. Where this is the case the dealer will usually assume that he will have to effect his swap at the least favourable rate.

Thus, if he is buying forward francs from a customer the banker will have to cover by selling spot. Next he will have to buy spot against a sale of forward. In quoting to his customer he will assume that when he comes to sell forward to the Market (against spot) he will have to give away the *larger* discount. Hence he will include the *larger* discount in the rate he quotes his customer. Thus if swaps in francs are quoted at 5–10 c. discount, he will base the rate he quotes to his customer on the larger discount—10 c., which he will add to the market buying rate for spot.

If he had been selling to the customer the banker would cover by buying spot, and then swapping the spot against a purchase of forward, for which he would assume that he would be able to obtain only the *smaller* discount, 5 c., which he will add to the market selling rate for spot.

Now let us consider the position when the rates are 10–5 c. *premium*.

In buying forward from a customer the banker will have to sell spot in the Market and then sell forward against the purchase of spot. In selling forward in the Market he will receive only the *smaller* premium, and will therefore allow his customer only 5 c.

In selling forward to a customer the banker will have to buy spot, then sell spot against a forward purchase. On the swap he will have to pay the *larger* premium for the forward currency, and will therefore charge the customer 10 c.

From this explanation it should be obvious that when swaps are quoted at a discount, the banker will give the customer the smaller discount when selling to him, and will require the larger discount when buying from him.

When swaps are at a premium the banker will charge his customer the higher premium when selling and allow him the smaller premium when buying from him.

In other words, where double-barrelled rates are quoted, the banker, when fixing his rate for his customer, uses the least favourable of the two from the customer's point of view. It will be remembered that a similar rule was enunciated on page 494 in regard to Forward Options—*Always quote that rate which is most favourable to the banker.*

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Example 8.—A banker is asked by a customer to sell him Fcs. 100,000 three months' forward. What rate will he quote and what profit will he make (ignoring expenses) if the rates at which he is able to deal are Fcs. 80·15—20 for spot and 10·15 c. discount for 3 months? Allow the banker 5 c. in the rate for his profit.

Solution :—

Market selling rate for spot	..	..	..	80·15
Less Banker's profit 5 c.	..	..	..	·05
				<u>80·10</u>
Add Discount on swap	..	..	..	·10
Rate quoted to customer	..	..	..	<u>Fcs. 80·20</u>
				<u>£ s. d.</u>
Banker sells Fcs. 100,000 @ 80·20 to customer, realising..				1,246 17 8
He buys spot from the Market at 80·15				<u>1,247 13 3</u>
These two operations show a loss of				<u>15 7</u>

He sells spot against forward, at a discount of 10 c. in his favour.

			<u>£ s. d.</u>
Proceeds of spot	=	$\frac{100,000}{80·20}$	1,246 17 8
Cost of forward	=	$\frac{100,000}{80·30}$	<u>1,245 6 8</u>
Profit on swap			<u>£1 11 0</u>

Net profit on the transaction = £1 11s. 0d. — 15s. 8d. = 15s. 4d.

(*Note.*—In the second part of the transaction it is not certain that the banker will effect the swap on the basis of the same spot rates as are quoted in the question. By the time he comes to effect the swap the spot rates may have moved considerably, but so long as the swap margin remains unaltered, the actual cost or profit arising from the swap will be approximately the same.

Thus, if the spot rates had moved to 80·45—50, and the swap margin was still 10·15 c. discount, the calculations would be:—

			<u>£ s. d.</u>
Proceeds of spot	=	$\frac{100,000}{80·50}$	1,242 4 8
Cost of forward	=	$\frac{100,000}{80·60}$	<u>1,240 13 11</u>
Profit on swap			<u>£1 10 9</u>

Alternatively, if the spot rates had moved to 70·95—80·00, and the swap margin was still 10·15 c. discount, the calculations would be:—

			<u>£ s. d.</u>
Proceeds of spot	=	$\frac{100,000}{80·00}$	1,250 0 0
Cost of forward	=	$\frac{100,000}{80·10}$	<u>1,248 8 10</u>
Profit on swap			<u>£1 11 2</u>

It will be seen that, though there is quite a wide movement in the spot rates, the profit on the swap is scarcely affected. This illustrates why it is that the banker protects himself by covering in the spot market, and carrying out the swap at his leisure—see Chapter XI.)

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Example 9.—A customer offers a London dealer 50,000 lire three months' forward. Calculate the rate which the dealer will apply, if the market spot rate is 92·78–83, and forward lire are quoted 15–10 c. per month under spot. Allow 5 centesimi in the rate for dealer's profit, brokerage, and other expenses.

Solution :—

Market buying rate for spot	.. .. .	92·83 lire.
Less 3 months' premium @ 10 c. per month	.. .. .	·30
		<u>92·53</u>
Add Allowance for profit, etc.	.. .. .	·05
Dealer's rate for 3 months' forward	.. .. .	<u>92·58</u> lire per £1.

Example 10.—If the T.T. rate London on New York is quoted on 30th September at \$3·64– $\frac{1}{4}$ per £1, whilst the forward margins are: one month, $\frac{1}{4}$ – $\frac{1}{4}$ c. premium; two months, $1\frac{1}{2}$ – $1\frac{1}{4}$ c. premium; and three months, $2\frac{1}{4}$ –2 c. premium, and a London banker is prepared to deal at these rates, what rates will he quote to a customer: (1) for the sale; (2) for the purchase of :—

- (a) \$10,000 for delivery 31st October;
- (b) „ „ „ during October at his option;
- (c) „ „ „ 30th November;
- (d) „ „ „ during November at his option;
- (e) „ „ „ during October/November at his option;
- (f) „ „ „ 31st December;
- (g) „ „ „ during December at his option;
- (h) „ „ „ during November/December at his option;
- (i) „ „ „ during October–December at his option?

Solution :—

Banker's Rates.				Selling.	Buying.
T.T.	.. .. .	.. .. .	.. .. .	3·64	3·64 $\frac{1}{4}$
1 month forward	.. .. .	.. .. .	.. .. .	3·63 $\frac{1}{2}$	3·63 $\frac{1}{2}$
2 months' forward	.. .. .	.. .. .	.. .. .	3·62 $\frac{1}{2}$	3·63
3 months' forward	.. .. .	.. .. .	.. .. .	3·61 $\frac{1}{2}$	3·62 $\frac{1}{2}$

From these the following rates can be quoted :—

				Selling.	Buying.
(a)	.. .. .	.. .. .	.. .. .	3·63 $\frac{1}{2}$	3·63 $\frac{1}{2}$
(b)	.. .. .	.. .. .	.. .. .	3·63 $\frac{1}{2}$	3·64 $\frac{1}{4}$
(c)	.. .. .	.. .. .	.. .. .	3·62 $\frac{1}{2}$	3·63
(d)	.. .. .	.. .. .	.. .. .	3·62 $\frac{1}{2}$	3·63 $\frac{1}{2}$
(e)	.. .. .	.. .. .	.. .. .	3·62 $\frac{1}{2}$	3·64 $\frac{1}{4}$
(f)	.. .. .	.. .. .	.. .. .	3·61 $\frac{1}{2}$	3·62 $\frac{1}{2}$
(g)	.. .. .	.. .. .	.. .. .	3·61 $\frac{1}{2}$	3·63
(h)	.. .. .	.. .. .	.. .. .	3·61 $\frac{1}{2}$	3·63 $\frac{1}{2}$
(i)	.. .. .	.. .. .	.. .. .	3·61 $\frac{1}{2}$	3·64 $\frac{1}{4}$

Example 11.—Using the figures in the preceding example and assuming that the customer enters into a contract: (a) for the purchase of \$10,000 from the bank; (b) for the sale of \$10,000 to the bank; for delivery at his option at any time during 1st October to 31st December, at what date must he deliver or take delivery of the currency if he is to take full advantage of his option?

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Solution :—

(a) Purchase of \$10,000 by the customer:—

Since dollars for forward delivery become *dearer* as the option is running, the customer is paying for them at the dearest rate, namely, for 31st December. He should therefore take delivery on 31st December.

(b) Sale of \$10,000 by the customer:—

In this case he is having to deliver dollars to the bank, in effect, at the T.T. rate, i.e., at the rate least favourable to himself.

To take full advantage of his option, therefore, he will deliver the dollars on 1st October.

Example 12.—The Market T.T. rate London on Paris on 30th June is $86\frac{1}{2}-\frac{3}{4}$ francs per £1, whilst the forward margins are: one month, $\frac{1}{4}-\frac{1}{8}$ discount; two months, $\frac{1}{4}-\frac{1}{8}$ discount; and three months, $\frac{1}{4}-\frac{1}{8}$ discount. A London banker is prepared to deal on the basis of these rates, allowing for his commission of $\frac{1}{4}$ franc.

- (1) What rates will he quote for selling francs for delivery: (a) 31st July fixed; (b) 31st August fixed; (c) buyer's option over two months; (d) buyer's option over three months?
- (2) What will be his *buying* rate for delivery: (a) seller's option over one month; (b) 30th September fixed; (c) seller's option 31st August–30th September?

Solution :—

Banker's Rates.				Selling.	Buying.
T.T.	..	..	..	$86\frac{1}{2}$	$86\frac{1}{2}$
1 month forward	..	..	..	$86\frac{1}{2}$	$87\frac{1}{4}$
2 months' forward	..	..	..	$86\frac{1}{2}$	$87\frac{1}{4}$
3 months' forward	..	..	..	$86\frac{1}{2}$	$87\frac{1}{4}$

From these the following rates can be quoted:—

(1) Selling.				(2) Buying.			
(a) ..	..	..	$86\frac{1}{2}$	(a) ..	..	$87\frac{1}{4}$	
(b) ..	..	..	$86\frac{1}{2}$	(b) ..	..	$87\frac{1}{4}$	
(c) ..	..	..	$86\frac{1}{2}$	(c) ..	..	$87\frac{1}{4}$	
(d) ..	..	..	$86\frac{1}{2}$				

Modification of Forward Contracts.—Although all forward contracts between bankers and their customers are made in express terms as to date, amount and form of delivery, it is not uncommon for the customer to ask later for some modification in the arrangements. Thus, he may ask the banker to allow an early delivery or a postponement of delivery, or he may wish to tender the currency in the form of a cheque or notes when he had agreed to deliver T.T. In each of these cases the banker has the right to refuse to modify the terms; but usually he will agree to do so if it can be arranged without loss to him.

Generally there are two alternatives: either he modifies the rate at which payment is to be effected, or else he closes off the existing contract at current rates, and makes a new contract based on current conditions.

Early delivery is treated on similar lines. If the customer has agreed to sell forward, and tenders his currency earlier than the contract date, the banker may either adjust the rate according to current con-

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ditions, or, more probably, will buy the currency at his spot rate and sell forward to his customer the amount necessary to close off the contract.

On the other hand, if the customer has agreed to buy forward, and asks for early delivery, the banker may adjust his rate, or alternatively, he may sell the currency to his customer at his spot rate and buy forward from his customer the amount due under the contract.

Example 14.—A customer has agreed to sell cheque for Belgian francs 50,000 for delivery on 30th June at Belgas 23·30. On 1st May he tenders a cheque for the amount and asks the banker to close off the contract. Calculate the amount due to the customer if the banker's dealing rates on May 1st are Belgas 23·10–15 for spot and Belgas 15–10 premium per month.

Solution :—

Belgian francs 50,000 is equivalent to Belgas 10,000.

Amount due to customer on June 30th $= \text{£} \frac{10,000}{23 \cdot 30} = 429 \quad 3 \quad 8$

This is closed off by banker selling him the

amount, 2 months forward, at Belgas 22·80 $= \text{£} \frac{10,000}{22 \cdot 8} = 438 \quad 12 \quad 0$

Due from customer £9 8 4

£ s. d.

Proceeds of cheque $\text{£} \frac{10,000}{23 \cdot 15} = 431 \quad 19 \quad 3$

Less amount due on compensation of forward contract

9 8 4

Net amount due to customer £422 10 11

Example 15.—A customer has agreed to buy Sw. Fcs. 50,000 at 16·95 for delivery on 31st March. On 1st March he asks to have the currency delivered at once. If the banker is then a dealer in spot at Fcs. 16·85–90 and is willing to settle the bargain on the basis that his 1 month forward rate is 5 c. discount, calculate the amount payable by the customer.

Solution :—

Under existing contract customer should pay $\text{£} \frac{50,000}{16 \cdot 95}$ on March 31st.

But banker compensates this contract by buying the francs back from him at his buying rate for 1 month forward, viz.

Fcs. 16·90 + ·05 = 16·95.

Since this is the same rate as was fixed under the contract, there is no difference to pay or receive.

Cost of Fcs. 50,000 (spot) at Fcs. 16·85 $= \text{£} \frac{50,000}{16 \cdot 85}$

Amount due from customer £2,967 7s. 2d.

The problem is a little more difficult when the customer has an option, as will be seen in the next example.

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Example 16.—A banker has sold to his customer Pes. 100,000 at 35·30 for delivery at customer's option during May. On April 1st the customer asks for immediate delivery. What amount will he have to pay if the banker is then a dealer in spot at 35·50·60 and in forward at 10·15 c. discount per month?

Solution :—

The customer is due to pay (during May) £ $\frac{100,000}{35 \cdot 30}$ = 2,832 17 3

But the banker will compensate this contract by buying the currency back from him for delivery during May—again at customer's option. The buying rate for May 1st (1 month forward) is 35·75, and for May 31st (2 months forward) is 35·90; the customer is entitled to expect the better of these rates, since the option is in his favour. Hence the banker will apply the lower rate, 35·75.

Hence, contract is compensated at 35·75	2,797 4 0
Due from customer	£35 13 3

	£ s. d.
Cost of Pes. 100,000 (spot) at 35·50	2,816 18 0
Add Difference above	35 13 3
Net amount due	£2,852 11 3

Example 17.—*Early delivery under Forward Contract.*

You purchase from a customer \$10,000 cheque New York for delivery three months forward @ 3·45½. One month after arrangement of this contract your customer delivers a cheque for \$5,000 and asks you to compensate the balance. You are then a dealer in dollar cheque @ 3·50½ and two months forward @ 1 c. - 1½ c. discount. You accordingly take the cheque from him at the contract rate less an allowance of 1 c. in the rate for early delivery, and sell him \$5,000 two months forward to compensate the undelivered portion. He asks you to discount his profit on the compensated part of the contract, and this you agree to do at 5 % p.a. Find the sterling amount with which you have to credit your customer.

Solution :—

	£ s. d.
Your customer has contracted to deliver to you \$5,000	
@ 3·45½	1,447 3 6
You compensate this by selling him \$5,000 2 months' forward at 3·51½	1,423 9 9
∴ Customer's profit	£23 13 9
Less Discount @ 5 % p.a.	3 11
	£23 9 10
Add Amount due to customer for \$5,000 @ 3·44½	1,451 7 7
	£1,474 17 5

∴ Total amount due to customer = £1,474 17s. 5d.

Example 18.—*Extension of Forward Purchase from Customer.*

A merchant contracts with his banker to sell the latter Rm. 10,000 for delivery 1st January at 14·20. Just before this date he delivers to the banker a draft on Berlin for Rm. 3,290·60, and asks for the balance of the contract to be extended until 1st March, which the banker agrees to do at 5 pfennige "in my favour".

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Find (a) the amount credited to the customer in exchange for his draft, allowing the banker 2s. 6d. % as collecting commission.

(b) The amount to be credited to the customer upon delivery of the balance on 1st March.

Solution :—

	£	s.	d.
(a) Equivalent of Rm. 3,290.60 @ 14.20	231	14	8
Less Collecting Commission @ $\frac{1}{4}$ %		5	9
∴ Amount to be credited to customer immediately	£231	8	11
(b) Equivalent of Rm. 6,709.40 @ 14.25	470	16	8
∴ Amount to be credited to customer on 1st March	£470	16	8

Example 19.—On 29th March, 1933, a London exchange operator is asked by a customer to quote for the sale to the latter of Fcs. 100,000 T.T. Paris for delivery at the customer's option during May and June, 1933. The London market rates are:—

Spot T.T. (for 31st March)	83½— $\frac{1}{4}$	
T.T. 1 month forward	$\frac{1}{2}$ -1 franc discount	
T.T. 2 months' forward	1-1½	,,
T.T. 3 months' forward	1½-2	,,

Assuming that the London operator can deal in the market at these rates and requires $\frac{1}{4}$ franc profit on the deal, what rate should he quote to the customer?

The customer accepts the rate, but on 29th May, 1933, he informs the dealer that he will not require the francs and asks for them to be bought back from him as on 31st May, 1933. If the London market rates are then:—

Spot T.T. (for 31st May)	85½— $\frac{1}{4}$	
T.T. 1 month forward	$\frac{1}{2}$ franc premium-par	
T.T. 2 months' forward	1-½ franc premium	
T.T. 3 months' forward	1½-1	,,

and the dealer again requires $\frac{1}{4}$ franc profit, what will be the sterling amount due to or by the customer in respect of the whole transaction?

(Neglect charges and expenses throughout.) (*Institute of Bankers, 1934.*)

Solution :—

The customer's option extends from 1st May to 30th June.

Hence the banker will quote the worst of the rates for one and three months' forward, respectively.

His rate for selling 1 month forward is $83\frac{1}{2} + \frac{1}{2} - \frac{1}{4} = 83\frac{3}{4}$ francs

His rate for selling 3 months' forward is $83\frac{1}{2} + 1\frac{1}{2} - \frac{1}{4} = 84\frac{3}{4}$ francs

∴ He will quote 83¾ fcs. per £1. £ s. d.

∴ Amount due from customer is $\frac{100,000}{83.75}$ = 1,194 0 7

On 29th May, the banker buys back the francs, for delivery

31st May, at his buying rate for spot francs, i.e., 85½

∴ Amount due to customer is $\frac{100,000}{85.5}$ = 1,169 11 10

Sterling amount due by the customer £24 8 9

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Bad Tender.—Most forward contracts are for T.T., though occasionally they are entered into for delivery of the currency by cheque. Whichever is agreed, the banker is entitled to demand tender in the form agreed upon. If the customer has agreed to deliver T.T., but tenders a cheque, the banker is entitled to refuse it, but usually if the amount is not too large (or the mailing period too long) he will merely charge a collection commission (as in Example 18 above). But if the centre is at some distance (e.g., New York) or the forward currency is at a heavy discount, the banker is entitled to send the cheque for collection and treat the delivery as having been *postponed* until the date when the proceeds are credited to him. Alternatively, he could adjust the rate to that which he would have quoted for cheque delivery, i.e., by adding the cheque margin.

If a customer tenders foreign notes, when the agreement is for cheque or for T.T., the banker may adjust the rate to allow for insurance and other expenses on the notes. But if the notes cannot be remitted abroad, owing to exchange restrictions, the banker will have to sell them for what they will fetch and buy in the cheque or T.T. against the customer, debiting him with the difference.

Example 20.—A customer agrees to deliver Swedish Kr. 5,000 by cheque, at 18·75, on January 31st. On that date he tenders Kr. 1,000 in bank notes and asks the banker to "close out" the remainder of the contract. Assuming that the banker is willing to take the notes at a discount of 50 öre on his cheque rate and that he is willing to deal in cheque Stockholm at Kr. 19·10·15, calculate the amount due to or from the customer.

Solution :—

Kr. 1,000 of contract is settled by tender of bank notes, which banker takes at discount of 50 öre on the contract rate, viz., 19·25, realising			£51 18 11
Amount due to customer under balance of contract			£ s. d.
= £ $\frac{4,000}{18 \cdot 75}$			213 6 8
This is compensated at Kr. 19·10, viz., $\frac{£4,000}{19 \cdot 1}$			= 209 8 6
Due to customer			£3 18 2
Net amount payable to customer = £51 18s. 11d. plus £3 18s. 2d.			
= <u>£55 17s. 1d.</u>			

Example 21.—You are dealing in T.T. Kobe at $1/4 \frac{1}{4} - \frac{1}{4}$, and in the forward at $3\frac{1}{4}$ discount per month. A customer who is expecting to receive yen from an importer abroad asks you to quote for one, two, and three months' options.

(a) What rates will you quote him?

(b) Assuming he accepts the one month option, buy from him Yen 64,071·30.

(c) If he subsequently asks you to accept cheque in lieu of T.T., adjust your rate to allow for 35 days' mail, reckoning interest at 6% p.a.

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Solution :—

(a) The following rates would be quoted:—

1 month's option		1/4½d.
2 months' option		1/4d.
3 months' option	.. .. .	1/3½d.

(b) Yen 64,071·30 at 1/4½d.

By practice:—

64,071·30 @ 1/-	.. .. .	£3,203·565
64,071·30 @ 4d.	.. .. .	1,067·855
64,071·30 @ 3½d.	.. .. .	8·343
		<u>£4,279·763</u>

Amount due from customer = £4,279 15s. 3d.

(c) If the customer tenders a cheque in place of a T.T. the rate will be adjusted as follows:—

T.T. rate	.. .. .	16·03125d.
Deduct Interest, 6 % for 35 days	.. .. .	·09223
		<u>15·93902d.</u>

∴ Rate is 1/3½d. per yen.

Example 22.—On 28th November the following rates ruled in the London Market:—

London on New York, T.T. for 30th November	.. .. .	5·20½-21
1 month forward margin	.. .. .	4½-5 c. discount
2 months' forward margin	.. .. .	7-7½ c. discount
3 months' forward margin	.. .. .	9½-10 c. discount

A London banker is asked to sell a customer \$17,500 for delivery at the option of the customer during the month of January, 1934. He makes the sale at the appropriate market rates, with an allowance of ½ c. for his profit and covers his risk by buying in the dollars for 31st January fixed, again at the market price. The customer requests delivery of the dollars on 2nd January. The banker complies and has to buy spot for that date against selling 31st January, when the market rates are, T.T., 5·36-36½, spot (for 2nd January) against end January, 3½-4 c. discount. What eventual profit or loss does the banker make on the transaction, neglecting all charges and expenses? (*Institute of Bankers, 1934.*)

Solution :—

Banker's selling rates:—

Spot	.. .. .	5·20½ - ½	= 5·20
1 month forward	.. .. .	5·20½ + 4½ - ½	= 5·24½
2 months' forward	.. .. .	5·20½ + 7 - ½	= 5·27
∴ Option over second month	.. .. .		5·24½

	£ s. d.
Cost of dollars to the customer = £ $\frac{17,500}{5·245}$	.. = 3,336 10 3

Banker covers by buying spot at 5·205, and swaps the spot for forward at a difference of 7 c. in his favour. Hence, the rate at which he obtains his forward cover is 5·205 + ·07 = 5·275.

Costing £ $\frac{17,500}{5·275}$		= 3,317 10 9
Profit		<u>£18 19 6</u>

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On 2nd January the banker effects a swap,
buying spot and selling forward.

Banker buys spot on 2nd January @, say, 5·36	£	s.	d.
\$17,500 @ 5·36	3,264	18	6
He sells forward for delivery 31st January, at a difference of 4 c. against him, say, 5·40, realising	3,240	4	9
Loss	24	3	9
Deduct Profit	18	19	6
Net Loss	£5	4	3

Investment Operations with Forward Exchange Secured.—The following are typical examples of modern investment operations, protected by forward deals, undertaken by bankers with the object of taking advantage of differences in the rates of interest ruling in various financial centres at the same time. The examples are self-explanatory, and it will be seen that they may be of almost infinite variety.

It will be noticed that in many of the following transactions the banker is able to make a profit by taking advantage of a disparity between forward margins and differences in interest rates. This proves conclusively that interest rates are not the *sole* determinant of forward margins (see Chapter XI, *ante*).

Example 23.—Investment in Kobe with Forward Exchange Guaranteed.

The rate of interest in Kobe being $6\frac{1}{2}\%$ per annum, a London banker wires his agent in the former centre to sell T.T. £50,000 on London at $21\frac{1}{2}$ d. per yen, placing the proceeds on fixed deposit in Kobe for 90 days. In London the anticipated total is sold 90 days forward at $21\frac{1}{2}$ d. If the London interest rate is 5 %, show the net resulting profit.

Solution :—

£50,000 T.T. on London sold in Kobe @ $21\frac{1}{2}$ produces ..	Yen 551,724·14
Int. thereon for 90 days @ $6\frac{1}{2}\%$ p.a.	8,502·6
Total	Yen 560,226·74
This total sold forward in London @ $21\frac{1}{2}$ d. yields at maturity	£50,916 8 10
Deduct £50,000 plus 90 days' interest at 5 % p.a.	50,616 8 9
Net resulting profit	£300 0 1

Example 24.—U.S. Dollar Deposit Invested in London with Forward Exchange Secured.

A London banker is offered a U.S. dollar deposit fixed for three months at $3\frac{1}{2}\%$ p.a., the forward rate on New York being $1-\frac{1}{2}$ c. premium, three months; spot rates 4·85 $\frac{1}{2}$ —86. Determine the rate at which sterling must be usable in London to make the deal profitable, and find the approximate net profit if the amount is \$486,000 and the three months' Treasury bill rate is $4\frac{1}{2}\%$ p.a.

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Solution :—

Dollars can be sold spot in London at \$4.86 and bought 3 months' forward at \$4.85, i.e., the banker can effect a swap at a difference of 1 c. against him.

∴ On \$4.86 the loss for 3 months is \$·01

∴ On \$100 the loss for 1 year is $\frac{\$·01 \times 100 \times 4}{4·86}$

= ·825 % p.a. (approx.).

If the deal is to be profitable, sterling must be usable in London at a margin over :—

$3\frac{1}{2} \% + ·825 \% = 4·325 \% \text{ (approx.)}$.

If, therefore, three months' Treasury or bank bills in London yield from $4\frac{1}{2}$ to $4\frac{1}{2} \% \text{ p.a.}$, the offer of the dollar deposit would be acceptable.

Illustration.

	£	s.
\$486,000 T.T. on New York sold in London at 4.86 yields ..	100,000	0
This sum, invested in 3 months' Treasury bills at $4\frac{1}{2} \% \text{ p.a.}$, yields	1,137	16
Total	£101,137	16
Amount of deposit	\$486,000	
$3\frac{1}{2} \% \text{ for 3 months}$	4,252·5	
	<u>\$490,252·5</u>	
This amount bought forward at 4.85 costs at maturity ..	101,083	0
Giving a profit, excluding expenses, of	<u>£54</u>	<u>16</u>

NOTE.—The yield on the Treasury bills is calculated as follows :—

3 months' discount @ $4\frac{1}{2} \% \text{ p.a.} = 1\frac{1}{8} \%.$

∴ A bill for £100 due in 3 months costs £98 $\frac{1}{8}$.

∴ £100,000 will purchase bills for £ $\frac{100,000 \times 100}{98\frac{1}{8}} = £101,137 \text{ } 16s.$

In this illustration it is assumed that the banker buys forward the principal amount of dollars *together with interest*. In practice, of course, he would effect a swap, buying forward the same amount as he sells spot, i.e., \$486,000. For purposes of convenience in this and the following examples, however, the less *practical* method of including interest is adopted.

Example 25.—Investment of New York Funds in London.

A New York dealer can obtain $3\frac{1}{2} \% \text{ p.a.}$ on 3 months' deposits, while in London 3 months' bank bills can be bought at $4\frac{1}{2} \% \text{ p.a.}$ If exchange rates are T.T. $4·85\frac{1}{4} - ·86\frac{1}{4}$ and 3 months' forward $\frac{1}{4} - \frac{1}{2} \text{ c.}$ premium, and the dealer can do business at the middle rates for spot and forward, what is the gain or loss per cent p.a. by undertaking a swap and deposit, and investing the sterling in bills, brokerage $\frac{1}{4} \text{ c.}$? Calculate the outturn of an investment of \$486,000.

Approximate Solution :—

Difference in interest rates * = $4\frac{1}{2} - 3\frac{1}{2} \% = \frac{1}{2} \% \text{ per annum.}$

= $\frac{3}{4} \% \text{ per quarter.}$

$\frac{3}{4} \% \text{ in } \$ \text{ rate at } 4·86 = ·01063 \$.$

= $1\frac{1}{4} \text{ c. in the rate.}$

* See Note over.

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∴ Selling dollars spot and buying 3 months' forward at $\frac{1}{8}$ c. *against the dealer* (middle rate) leaves a margin of $1\frac{1}{8}$ c. - $\frac{1}{8}$ c. - $\frac{1}{4}$ c. (brokerage) = $\frac{1}{4}$ c. in the rate, or

$$\frac{15}{64} \times \frac{1}{4.86} \% \text{ per 3 months}$$

$$= \frac{1}{8} \% \text{ per 3 months (approx.)} = \frac{1}{8} \% \text{ per annum.}$$

If the forward dollar rate goes to a higher premium the operation becomes too fine to show a reasonable profit.

* NOTE.—If London bills can be bought at $4\frac{1}{2} \%$ p.a., the *actual yield* is calculated thus:—

$$4\frac{1}{2} \% \text{ p.a. for 3 months} = 1\frac{1}{8} \%$$

$$\therefore \text{£100 bill costs } 98\frac{1}{8}$$

$$\therefore \text{£98}\frac{1}{8} \text{ yields £100 in 3 months}$$

$$\text{equivalent to } \frac{1\frac{1}{8}}{98\frac{1}{8}} \times \frac{100}{1} \times \frac{4}{1} \% \text{ per annum}$$

$$= 4.5512 \% \text{ p.a., i.e., slightly more than } 4\frac{1}{2} \% \text{ p.a.}$$

For most estimates of yields it is sufficient to take the rate of discount, but where an *exact* result is required, the *true* yield must be taken.

Illustration :—

	£	s.	d.
\$486,000 T.T. on New York sold in London at 4.86 spot yields	100,000	0	0
This sum invested in 3 months' bank bills at $4\frac{1}{2} \%$ p.a. yields	$\frac{£10,000 \times 4.5512}{4 \times 100}$	1,137	16 0
Total		<u>£101,137</u>	<u>16 0</u>

3 months forward rate, less brokerage,

$$= \$4.86 - \frac{1}{8} \text{ c.} - \frac{1}{4} \text{ c.} = \$4.85\frac{1}{4}$$

£101,137 16s. sold forward at $\$4.85\frac{1}{4}$ yields	..	..	..	\$490,692.16
Original deposit	..	..	..	\$486,000
In New York this would yield 3 months @ $3\frac{1}{2} \%$	..	..	..	4,405
Profit	..	..	..	<u>490,405</u>
	..	..	..	<u>\$287.16</u>

or approximately $1\frac{1}{8} \%$ p.a.

Example 26.—A London banker purchases a T.T. for 1,000,000 reichsmarks when the market rates are $20.51\frac{1}{2}$, and places the funds on fixed deposit in Berlin for a period of three months at a rate of $7\frac{1}{2} \%$ p.a. At the same time he sells forward the amount of the deposit plus the interest, the market forward rates being $1\frac{1}{2}$ – $2\frac{1}{2}$ pfennige discount for three months. Calculate (a) the original cost of the deposit, and (b) the amount realised by the proceeds at maturity.

Solution :—

(a) Cost of 1,000,000 reichsmarks at 20.51 .

$$= \text{£} \frac{100,000}{20.51}$$

$$= \text{£}48,756.704$$

$$= \underline{\underline{\text{£}48,756 \text{ 14s. 1d.}}}$$

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(b) Amount realised by proceeds at maturity.

$$= \text{Rm. } 1,000,000 + \frac{1,000,000 \times 15}{800}$$

$$= \text{Rm. } 1,018,750$$

Assuming the banker effects a swap, these proceeds are sold forward at a difference of $2\frac{1}{2}$ pf. against him, say at 20·5325.

$$\therefore \text{Sterling} = \text{£} \frac{1,018,750}{20 \cdot 5325}$$

$$= \text{£} 49,616 \cdot 462$$

$$= \text{£} 49,616 \text{ 9s. } 3\text{d.}$$

Example 27.—An exchange operator in London can borrow U.S. dollars at $2\frac{1}{2}$ % p.a., and can lend sterling at 3 % p.a. If the T.T. rate, London on New York, is quoted in the Market as \$4·85 $\frac{1}{4}$ ·86 per £1 and the three months' (or 93 days') forward margin is $\frac{1}{4}$ c. premium, find the profit or loss, neglecting expenses, on borrowing \$500,000, and lending the sterling equivalent for 93 days. (New York allows 360 and London 365 days to the year.)

Solution :—

The operator will sell the \$500,000 in the form of a T.T. on New York at the rate of

$$\text{\$4·86 per £1, giving a net yield of } \text{£} \frac{500,000}{4 \cdot 86} = \text{£} 102,880 \cdot 659$$

On this he will receive interest at 3 % p.a. for

$$93 \text{ days} = \frac{102,880 \cdot 659 \times 3 \times 93}{365 \times 100}$$

	786·403	£	s.	d.
∴ Total proceeds of loan in London	£103,667·062	103,667	1	3

In New York he has to pay interest at $2\frac{1}{2}$ %

$$\text{p.a. on \$500,000} = \$ \frac{500,000 \times 5 \times 93}{360 \times 100 \times 2} = \$ 3,229 \cdot 17$$

∴ He must buy forward \$503,229·17, and, assuming he effects a swap, the rate will be $\frac{1}{4}$ c. against him, viz., 4·85 $\frac{1}{4}$, costing

$$\text{£} \frac{503,229 \cdot 17}{4 \cdot 8575} = \text{£} 103,598 \cdot 388 = 103,598 \quad 7 \quad 9$$

∴ His profit on the deal	£68 13 6
--------------------------	----------

Example 28.—An exchange operator can borrow sterling at 4 % p.a., and can lend francs at $5\frac{1}{2}$ % p.a. If the market rates for T.T., London on Paris, are 123·95–124·00 francs per £1, and the three months' forward margin in London is 20 c. 15 c. premium, find the profit or loss, neglecting expenses, on borrowing £100,000, and lending the franc equivalent for three months.

Solution :—

The operator has to borrow sterling, buy spot francs and lend them, and secure the exchange risk by selling the proceeds forward:—

Amount of francs obtainable for £100,000 at 123·95	Fcs. 12,395,000
This earns interest for 3 months at $5\frac{1}{2}$ % p.a.	162,684·375
∴ Total proceeds in 3 months	Fcs. 12,557,684·375

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Assuming that the spot purchase and the forward sale are combined in a swap, the forward rate will be 15 c. in favour of the operator, viz., 123·80.

Value of francs 12,557,684·375 at forward rate of 123·80

	$= \text{£} \frac{12,557,684 \cdot 375}{123 \cdot 8}$				
	$= \text{£}101,435 \cdot 253$	$=$	£	s.	d.
			101,435	5	1
Out of this the dealer will have to repay £100,000 plus					
interest at 4 % for 3 months (£1,000) totalling			£101,000	0	0
∴ The dealer makes a profit on the deal of			£435	5	1

Example 29.—Investment in Indian Treasury Bills with Forward Exchange Secured.

Calculate the net yield per cent. per annum from the following investment in Indian Government Treasury bills. You buy six months' Treasury bills with a face value of 7 lacs at an issue price of 98. You buy the spot rupees at $1/8\frac{1}{4}$ d. and re-sell the proceeds of the bills six months' forward at $1/8\frac{1}{4}$ d. Brokerage is $\frac{3}{4}$ % p.a. on the sterling cost of the bills. Cable expenses amount to £5.

Solution :—

				£	s.	d.
The bills cost	$\frac{700,000 \times 98 \times 18\frac{1}{4}}{100 \times 240}$	..	..	52,164	11	8
Brokerage @ $\frac{3}{4}$ %	..	..	..	8	3	0
Cable expenses	..	..	..	5	0	0
				£52,177	14	8
The sterling yield at maturity is £	$\frac{700,000 \times 18\frac{1}{4}}{240}$	..	$=$	53,138	0	5
Profit	..	..	..	£960	5	9

$$\text{Therefore the yield per cent per annum} = \frac{960 \cdot 2875 \times 12 \times 100}{6 \times 52,177 \cdot 7333} = 3 \cdot 6808 \%$$

Example 30.—Investment in British Treasury Bills with Forward Exchange Secured.

A New York banker buys sterling in New York for investment in Treasury bills in London. He covers his purchase by a sale of sterling three months' forward. He deals at a spot rate of \$3·30 and at a forward rate of $\frac{1}{8}$ c. premium. His London agent misses the Treasury bills by tender and is obliged to purchase them in the Discount Market at a brokerage (i.e., $\frac{1}{4}$ %) below $\frac{1}{4}$ %. What return (calculated to the nearest $\frac{1}{4}$ % p.a.) will the New York banker obtain from thus employing his funds?

Solution :—

Profit on re-exchange = $\frac{1}{8}$ c. = \$.001875 for 3 months = \$.0075 p.a.
Yield p.a. on \$3·3 = \$.0075.

∴ Yield per cent. p.a. = $\frac{\cdot 75}{3 \cdot 3} = \cdot 227$ (say) $\frac{1}{4}$ %.

Yield per cent. p.a. on Treasury bills = $\frac{1}{4}$ % (approx.).*

Total yield = $\frac{1}{4} + \frac{1}{4}$ % p.a.

∴ Total yield per cent. p.a. (to nearest $\frac{1}{4}$ % p.a.) = $\frac{1}{2}$ %.

* See note on page 724 re calculation of true yield.

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Example 31.—Borrowing Sterling by Selling Cheque on New York and Covering by Forward T.T.

Over the turn of the half-year ending 30th June, 19.., 7-day money in London was worth 5 %, while New York T.T. rate was $4\cdot86\frac{1}{2}$, whilst the margin for selling cheque on New York was $\frac{1}{2}$ c. over T.T. The American mail left London on 26th June for delivery in New York on 2nd July. If a London dealer wished to borrow sterling over the turn of the half-year, would it have been cheaper to borrow money in the London Market or to sell cheque in New York (for which he receives sterling at once), covering by an outright forward T.T. purchase, valeur compensée 2nd July, the rate at which he can effect the short forward purchase for this date being $4\cdot85\frac{1}{2}$.

Solution :—

Dealer sells cheque at $4\cdot86\frac{1}{2}$, and buys 2nd July at $4\cdot85\frac{1}{2}$, a total charge of $\frac{1}{2}$ c. in the rate.

Money in London is worth 5 % per annum.

6 days at 5 % p.a. is approx. $\frac{1}{2}$ of 1 %.

$\frac{1}{2}$ % of $4\cdot85\frac{1}{2}$ = \$.00405

= $\frac{1}{2}$ c. (approx.) in the rate.

Therefore the dealer can save $\frac{1}{2}$ c. - $\frac{1}{2}$ c.

= $\frac{1}{2}$ c. per £ by selling cheque and buying forward T.T.

Example 32.—Investment in Vienna Bills with Forward Exchange Secured.

The following is an actual example of an investment operation made from London.

£50,000 T.T. on London was sold in Vienna @ $34\cdot48$, yielding S. 1,724,000·00

Which was placed to the credit of Vienna *Nostro* Account

Bills to the value of S. 1,700,000 having

an average of 3 months to run were pur-

chased at a discount of 10 %, plus $\frac{1}{2}$ %

commission, and the schilling account was

debited with their cost, viz. S. 1,700,000

Less total discount and commission 43,444·44

1,656,555·56

Balance

S. 67,444·44

This balance was placed on fixed deposit for 3 months at 10 %

p.a. (free of all taxes) yielding

S. 1,686·11

The balance of the deposit, plus interest, viz., S. 69,130·55, and

the face amount of the bills, S. 1,700,000, were sold forward

3 months at $34\cdot76\frac{1}{2}$, returning to London at maturity . . . £50,886 8 8

This shows a profit of £886 8s. 8d., or approximately 7 % per annum.

*Example 33.—*A London banker is prepared to deal in T.T. New York at $4\cdot84\frac{1}{2}$ — $4\cdot84\frac{1}{2}$. He buys a parcel of 60 days' sight bills on New York for a total face value of \$153,479·50 and sells the proceeds forward at $4\cdot85\frac{1}{2}$. Discount in New York is $3\frac{1}{2}$ % p.a., and is calculated on a 360-day year.

Find (a) the banker's buying rate for the bills, to the nearest $\frac{1}{2}$ c.; (b) his outlay in sterling; and (c) the sterling equivalent of the proceeds at maturity. Allow 10 days for mailing period, but neglect other charges.

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Solution :—

(a) T.T. rate (buying) = \$4.84½	..	..	..	4.849375
Add Interest 70 days at 3½ %	..	..	..	.03536
				<u>4.884735</u>

∴ Bankers' Buying Rate for 60 days' sight draft (to nearest ¼ c.)
= \$4.88½ per £1.

(b) Cost of \$153,479.50 at 4.88½ = £31,418.526
= £31,418 10s. 6d.

(c) Forward rate, \$4.85⅓ = \$4.850625
Value of \$153,479.50 at \$4.850625
= £31,641 3s. 7d.

Example 34.—If the brokers in London quote Zurich at either side of 17.90 and the three months' forward Swiss franc as ½ - ¾ c. premium, find the yield to the nearest ½ th % p.a. on a purchase of three months' Swiss bank acceptances at 2½ % p.a. after securing the exchange by a swap undertaken in the London Market.

Solution :—

The banker will buy the bills at a long rate based on the spot rate of 17.90 and will cover this purchase by selling spot at 17.90. On these operations he will receive a net yield of 2½ % p.a.

He has now to "swap" the spot sale for a forward sale, i.e., he sells forward against a purchase of spot, at a margin of ½ c. in his favour (since forward francs are at a premium).

This margin represents a percentage yield for one year of:—

$$\begin{aligned} & \frac{12}{3} \times \frac{3}{8} \times \frac{1}{17.90} \times \frac{100}{1} \\ &= .084 \% \text{ p.a.} \\ & \text{Add } 2.8125 \% \text{ p.a. (Yield on bills.)} \\ & \text{Total Yield} = \underline{2.8965 \% \text{ p.a.}} \\ & \text{Say, } \underline{2\frac{7}{8} \% \text{ p.a.}} \end{aligned}$$

Example 35.—(a) The market in three months' Treasury bills is ½ % - ¾ %. Assuming that your bank can deal at these prices with the bill brokers, how would you sell £100,000 Treasury bills, taking ¼ in the rate for yourself?

(b) If you sell the bills to an American banker at this price, what is his net yield if spot sterling is quoted at 4.49-50, and three months' forward sterling in New York is 2-3 c. premium? He covers the exchange risk.

Solution :—

(a) The bank can buy Treasury bills at ½ % p.a. and will therefore be willing to sell at ½ minus ¼ = ¼ % p.a.

(b) The New York banker will effect a swap of spot sterling against the forward at 2 c. in his favour, viz., at 4.52 against 4.50.

If, therefore, the New York banker buys £100,000 Treasury bills, he will have to purchase sterling at 4.50.

The bills will therefore cost him	..	..	..	..	\$450,000
Less discount @ ¼ % for 3 months	..	..	..	..	667.97
					<u>\$449,332.03</u>
He will sell £100,000 @ 4.52, realising	..	..	..	..	\$452,000.00
Showing a profit of	..	..	..	..	<u>\$2,667.97</u>

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This represents a percentage yield per annum of:—

$$\frac{2,608}{449,333} \times \frac{4}{1} \times \frac{100}{1} = 2.375 \%$$

Net Yield, say, 2½ % p.a.

Example 36.—Swap and Deposit in Yen.

The following is an example of the rough and exact calculations of the yield from an investment in yen.

Rough Calculation.

At the time of writing, forward yen in London are at a premium of about ¼d. per three months, i.e., 1d. per year, which, on a basis of 1/9½d. per yen, gives a yield of

$$\frac{1 \times 100}{21.75} \% = 4.5977 \% \text{ p.a.}$$

Less brokerage, which on yen is ½nd per cent.,

i.e., ½ % p.a. 	.125	
	4.4727	% p.a.

A swap and deposit operation in yen would therefore yield 4.4727 % even if the deposit in Japan received no interest. It would require an interest rate of only 1½ % to bring the yield up to 5.9727 %, or nearly 6 %.

Exact Calculation.

Yen 500,000 sold forward, value 6th Sept., @ 1/10d. ..		£45,833 6 8
Yen 500,000 bought spot, value 6th June, @ 1/9½d. ..		45,312 10 0
		£520 16 8
Interest on Yen 500,000 from 6th June to 6th Sept. (92 days)		
at 1½ % = Yen 1,890.41, which at 1/10d. (the forward		
rate) 		£173 5 9
		£694 2 5
<i>Less</i> brokerage (½ % on £45,833 6s. 8d., the larger side of		
the swap*) 		14 6 5
		£679 16 0

* NOTE.—Only one brokerage is usually charged on a swap.

Hence an investment of £45,312 10s. in Japan for 92 days at 1½ % p.a. produces £679 16s., or 5.9521 %, subject to a small outlay on cables, the only other expense.

The first calculation is that which a busy dealer would make, the second being left to the instruction clerks. The slight discrepancy between the two rates calculated is due to the fact that the dealer calculates roughly that he will be out of his money for exactly a quarter of a year, whereas his investment actually lasts for 92 days, i.e., $\frac{92}{365}$ of a year.

NOTE.—In this example the interest has been sold separately. This is the practical method—see Note to Example 24.

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Example 37.—Arbitrage by "Swaps" of Spot and Forward Pesetas in two centres.

London brokers quote Madrid one month forward at 3-5 premium. During a telephone call to Berlin, a London dealer induces a German operator to quote him the forward peseta on a sterling basis, and is given a quotation of 6-8 premium. He accordingly swaps pesetas 500,000 in Berlin at 6 centimos, and covers in London at the middle, i.e., 4 centimos. Calculate his profit on the operation if the London spot rate is 34·21.

Solution :—

In Berlin :—

500,000 pesetas bought spot at the equivalent of 34·21, cost	£14,615 12 2
500,000 pesetas sold one month forward at the equivalent of 34·15, yield	14,641 5 9
Banker's profit	<u>£25 13 7</u>

In London :—

500,000 pesetas sold spot at 34·21, yield	14,615 12 2
500,000 pesetas bought one month forward at 34·17, cost ..	14,632 14 4
Loss	<u>£17 2 2</u>

Gross Profit = £25 13s. 7d. less £17 2s. 2d.
= £8 11s. 5d.

Gross profit £8 11 5

From this total, certain expenses would have to be deducted, viz. :—

One "pay" and one "receive" cable (the forwards being settled by mail), say ..	£0 8 0
Brokerage on London swap at 5/- per Ptas. 100,000	1 5 0
Telephone call (assuming that the London dealer originated it and that no other business was done), say	10 0
Special "overdraft commission" charged by Spanish banks where the payment is not covered a full day ahead ($\frac{1}{16}$ th per mille on two payments of Ptas. 500,000 each) Ptas. 50·00, or roughly	1 9 3

	<u>3 12 3</u>
Net profit	<u>£4 19 2</u>

A margin of two centimos between the forward swaps therefore gives a net profit of £4 19s. 2d. If, however, a margin of only one centimo were obtained, it is clear that the net profit would be only 13/6d. As even one centimo is hard to make nowadays, the difficulties of arbitrage under present conditions are obvious.

*Example 38.—*A London banker has an overdraft in New York amounting to \$1,000,000. He knows that the overdraft will be cleared the following day, but in order to avoid paying 5% on his overdraft he carries out a "short swap" for the delivery of dollars "to-day against to-morrow" at a discount of $\frac{1}{4}$ c. per diem. If his London funds are worth 1% to him and brokerage is £1 10s. per \$100,000, work out: (1) the total cost of the swap; and (2) the saving effected thereby. Assume that spot dollars are quoted at \$4 = £1.

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Solution :—

Cost of swap (he buys spot and sells forward)

$$\begin{aligned}
 &= \frac{1}{64} \text{ c. per } \$4 \text{ plus } 30\text{s. per } £100,000 \\
 &= \frac{1}{64} \text{ c.} + \frac{(1.5 \times 400 \times 4)}{100,000} \text{ c. per } \$4 \\
 &= .015625 \text{ c.} + .024 \text{ c. per } \$4 \\
 &= .039625 \text{ c. in the rate.}
 \end{aligned}$$

$$\text{The actual cost (on } \$1,000,000) \text{ is } \$ \frac{.039625}{100} \times \frac{1,000,000}{4} = \$99.0625$$

$$\text{Saving in interest is } \frac{1,000,000}{360} \times \frac{5}{100} = 138.8888$$

$$\text{Net saving} \quad \dots \quad \dots \quad \dots \quad \underline{\underline{\$39.8263}}$$

$$\begin{array}{rcl}
 \$39.82 \text{ (i) } \$4 & & \text{£ s. d.} \\
 & & = 9 \ 19 \ 1
 \end{array}$$

Deduct loss of interest at 1 %

$$= \frac{1}{100} \times \frac{1,000,000}{4} \times \frac{1}{365} \dots \dots \dots 6 \ 17 \ 0$$

$$\text{Total saving} \quad \dots \quad \dots \quad \dots \quad \underline{\underline{£3 \ 2 \ 1}}$$

Example 39.—A London banker sells \$40,000 to a customer for delivery in three months' time. His selling rate is based on the London Market rates of \$3.76½-¼ for T.T. and ¼-½ c. premium for three months' delivery, with an allowance of ½ c. for his profit. He covers himself by buying the dollars in Paris, for the same forward date, at an "outright" rate of Fcs. 25.53 per \$, and subsequently buys the necessary francs in the London market when the ruling rates are Fcs. 96½-¾ for T.T. and Fcs. ¼-½ premium for three months' delivery. Neglecting expenses and charges, what will be the eventual profit or loss on the transaction? (*Institute of Bankers, 1932.*)

Solution :—

Bankers' selling rate for 3 months' forward is \$3.755.

$$\begin{array}{rcl}
 \text{Proceeds of sale of dollars} & = £ \frac{40,000}{3.755} & \dots \dots \dots \text{£} \quad \text{s.} \quad \text{d.} \\
 & & \dots \dots \dots 10,652 \quad 9 \quad 3 \\
 \text{Cost of covering} & = £ \frac{40,000 \times 25.53}{96} & \dots \dots \dots 10,637 \quad 10 \quad 0 \\
 \therefore \text{Profit on transaction is} & & \dots \dots \dots \underline{\underline{£14 \ 19 \ 3}}
 \end{array}$$

Example 40.—A dealer finds the market in New York Guaranteed Mail Transfer for seven days ahead is 3.47½-¾, while there are sellers of T.T. for forward delivery in seven days at 3.47½. Therefore, he sells G.M.T. and buys forward, and thus has the use of £100,000 for one week. Ascertain the rate of interest per cent. per annum he is paying for the use of the funds.

Solution :—

The dealer buys forward at 3.47½, and sells G.M.T. at 3.47¾. Therefore he gives away ½ c. on every 3.47½ for one week.

$$\therefore \text{For 365 days he gives away } \frac{1}{2} \text{ c.} \times \frac{365}{7} \text{ per } 3.47\frac{1}{2} \text{ c.}$$

$$\begin{aligned}
 \therefore \text{On 100 cents he gives away per year} & \frac{.25 \text{ c.} \times 365 \times 100}{7 \times 3.47.875} \\
 & = 3.747 \text{ cents.}
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{The rate of interest paid by the dealer for the use of the funds} \\
 = \text{(approx.) } \underline{\underline{3\frac{1}{2} \% \text{ p.a.}}}
 \end{aligned}$$

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Example 41.—Temporary Use of Sterling by Means of a Purchase of a Guaranteed Mail Transfer and Sale of Proceeds Forward.

During 1929 certain restrictions were placed on the employment of foreign funds in the New York Call Money Market, and, as a result, it was not always possible for a London bank, wishing profitably to use surplus sterling for a week or 10 days, to adopt what had become a frequent practice and utilise the funds in New York, by buying spot and selling forward dollars, and using the spot on the New York Call Money Market at the higher rates prevailing there.

The London offices of American and Canadian banks have greater facilities in this direction, however, and they are usually ready to buy spot dollars and sell guaranteed mail transfers for payment in New York on a stated date, the sterling payment here being "compensated".

If, therefore, the forward margin will permit and the parties can agree on rates, a three-cornered deal can be carried out as follows:—

A wishes to use his sterling for 10 days at about 5 %.

B will sell spot dollars and buy 10 days forward, and wants $\frac{1}{2}$ c. in his favour for the "swap" (about 1 % p.a.).

C (the borrower) will buy spot dollars and sell G.M.T. on New York 10 days ahead, being willing to give away $\frac{1}{2}$ c. for the 10 days' run (about 6 % p.a.).

If, therefore, the spot rate is assumed to be 4.86:—

C buys spot dollars for the 10th from *B* and sells *A* G.M.T. for the 20th (i.e., he pays and receives sterling in London on the 10th, receives dollars in New York on the 10th and pays them out on the 20th).

B sells dollar T.T. deliverable 10th to *C* at 4.86, and buys dollar T.T. deliverable 20th from *A* at 4.86 $\frac{1}{2}$. He pays out dollars and receives sterling on the 10th. On the 20th he receives dollars and pays out sterling.

A buys G.M.T. from *C* due 20th at 4.86 $\frac{1}{2}$, selling forward dollars to *B* to cover for the 20th. Thus, he pays out sterling on the 10th. On the 20th he receives sterling and receives and pays dollars.

On the 10th.

A pays *C* sterling for G.M.T.

C uses sterling to pay for T.T. from *B*.

C receives dollars in New York from *B*.

On the 20th.

C uses dollars received from *B* on 10th to meet G.M.T. due to *A*.

A uses dollars from *C* to meet forward contract due to *B*.

B pays *A* sterling for forward T.T.

$\therefore$ *A* has used sterling from 10th to 20th for $\frac{1}{2}$ c. (practically 5 % p.a.).

B has had use of sterling but loses use of dollars for 10 days and receives $\frac{1}{2}$ c. compensation. (It evidently must suit him to have sterling instead of dollars or he would not do the deal.)

C has had use of dollars for 10 days without cost of sterling, but has to give away $\frac{1}{2}$ c. (6 % p.a.), so he can evidently use dollars at, say, 7 % p.a.

*Example 42.—*A London exchange operator has sold to a customer \$20,000 T.T. Montreal for delivery in three months' time at the rate of 3.75 $\frac{1}{2}$, which he has covered by a purchase of a similar amount of spot T.T. at the rate of 3.75. He must reckon that the sterling he uses in his spot purchase is worth 1 % p.a. to him, while he will receive interest on his account in Montreal at the rate of 2 $\frac{1}{2}$ % p.a. If the dealing rate in the London Market for three months' Montreal

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against spot is $2\frac{1}{2}$ – $3\frac{1}{2}$ c. discount, what can the dealer do to improve the rate of profit shown by the transaction as it stands? Give full arithmetical reasoning.

(Take the period of the contract as being exactly one-quarter of a year and neglect charges and expenses.) (*Institute of Bankers, 1933.*)

Solution :—

By carrying out a swap (selling dollars spot and buying them forward) the banker would incur a loss of interest at the rate of $(2\frac{1}{2} - 1)\%$ p.a., i.e., $1\frac{1}{2}\%$ p.a., or $\frac{3}{8}\%$ for three months, which, on a rate of \$3.75, represents:—

$$\frac{3.75 \times 3}{100 \times 8} = \$0.14.$$

i.e., he *loses* interest amounting to 1.4 c. per £1 in three months.

But he *receives* on his swap a margin of $2\frac{1}{2}$ c.

Hence, by swapping his spot dollars for delivery in three months he can effect a net gain of approximately 1 c. per £1.

Example 43.—Option Deal in France.

A dealer buys from a customer French francs for delivery at seller's option during August, and covers by selling spot at 124 for 31st July. On 28th July the customer notifies the dealer that the francs will not be delivered until the end of August. If one month forward francs are 35 to 40 c. discount, while the Paris overdraft rate is 8% p.a., and London money is worth 4% , what should the dealer do, and why?

Solution :—

Paris overdraft rate	..	..	..	8% p.a.
London money rate	..	..	..	4% p.a.
Difference in cost of funds	..	..	..	$= 4\%$ p.a.
4% p.a. on 124 for 1 month = 41½ c.				

Therefore if the market quotes one month forward Paris at 35 to 40 c. discount, it is $1\frac{1}{2}$ c. cheaper for the dealer to buy spot against one month forward at a difference of 40 c. against him than to have an overdraft in Paris at 8% .

Example 44.—A London banker can borrow sterling for three months at $4\frac{1}{2}\%$. He has the following possible investments: (a) Treasury bills at $4\frac{1}{2}\%$; (b) any of the following currencies, by buying spot and selling forward at the margins given: New York, $\frac{3}{4}$ c. premium, three months, interest 4% ; Paris 62 c. premium, three months, interest $2\frac{1}{2}\%$; Amsterdam, $4\frac{1}{2}$ c. premium, three months, interest 3% ; Berlin, $5\frac{1}{2}$ pf. discount, three months, interest $6\frac{1}{2}\%$. Spot rates are: New York, 4.85½; Paris, 123.92; Amsterdam, 12.12; Berlin, 20.50. Brokerages may be disregarded. Which investment should he choose, and what would be the profit on an investment of £100,000?

Solution :—

If the banker invests in Treasury bills at $4\frac{1}{2}\%$ he gains approx. $\frac{1}{2}\%$ p.a., since he has to pay only $4\frac{1}{2}\%$ for the money which he invests.

If he buys spot and sells forward New York at $\frac{3}{4}$ c. premium, he makes $2\frac{1}{2}$ c. for a full year, which on \$4.86 is $\frac{1}{2}\%$ p.a. (approx.). As the difference in interest between the two centres is $\frac{1}{2}\%$ p.a., there is no profit in the operation.

If he buys spot and sells forward Paris at 62 centimes premium, he makes Fcs. 2.48 in a full year, which on Fcs. 124 is 2% p.a. The difference in interest between the two centres is 2% p.a., so again he would make no profit.

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If he buys spot and sells forward Amsterdam at $4\frac{1}{2}$ c. premium, he makes 18 c. on a full year, which on 12·12 is just less than $1\frac{1}{2}$ % p.a. The difference in interest is $1\frac{1}{2}$ % p.a. so that *he would make a small loss.*

If he buys spot and sells forward Berlin at $5\frac{1}{2}$ pfennige discount, he will lose $20\frac{1}{2}$ pfennige in a full year, which on 20·50 is 1 % p.a. loss. As he will make 2 % p.a. profit by the difference in interest between the two centres *he will make a net profit of 1 % p.a. by investing in Berlin.*

Hence he would operate in reichmarks.

Purchase of reichsmarks @ 20·50 for £100,000			
realises	Rm. 2,050,000		
Add Interest @ $6\frac{1}{2}$ % for 3 months	33,312·5		
Proceeds at Maturity	Rm. 2,083,312·5		
Sale of Rm. 2,083,312·5 @ 20·55 $\frac{1}{2}$ realises		£	s. d.
£ 2,083,312·5		101,371	11 5
<u>20·55125</u>			
Cost of loan is	£100,000		
Plus interest, $4\frac{1}{2}$ %, 3 months	1,125		
		101,125	0 0
Profit		£246	11 5

Example 45.—A Dutch banker purchases a parcel of three months' bills on London at $8\cdot60\frac{1}{2}$ and finds he can re-discount them at $\frac{1}{4}$ ths % p.a. in the London Money Market. Spot sterling is quoted at $8\cdot62\frac{1}{2}-\frac{1}{4}$ on the Amsterdam Bourse, and the three months' forward quotation is 1 c. over spot. Assuming that he can use florins at $\frac{1}{4}$ % p.a. in Holland, ascertain whether he should hold the bills, or re-discount them.

Solution :—

If the banker holds the bills until maturity, for every £100 worth of bills he can sell £100 forward, realising in three months' time (at Fls. $8\cdot63\frac{1}{4}$) Florins 863·25.

If he discounts his bills immediately he will receive £100 less discount, viz.:—

$$\begin{aligned} & \text{£100 less } \frac{100 \times 11 \times 1}{4 \times 16 \times 100} \\ & \text{i.e., £100 less 3s. 5d.} \\ & = \text{£99 16s. 7d.} \end{aligned}$$

By selling this spot, at Fls. $8\cdot62\frac{1}{2}$, he realises

Fls. $99\cdot829 \times 8\cdot6225$ Fls. 860·776

He can utilise these Florins at $\frac{1}{4}$ % p.a.

∴ Add Interest for 3 months 1·076

Net proceeds in 3 months' time Fls. 861·852

Hence the first procedure is the more profitable, and the banker will hold the bills.

Example 46.—Investment in Bank bills with Exchange Secured.

A Swiss banker inquires by telegram at what rate a London banker can sell £50,000 three months' bank bills "*en pension, change assuré*".

[NOTE.—This order means that the Swiss banker wishes to utilise Swiss francs to invest in sterling bills, but not wishing to suffer any loss in exchange, desires the

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seller to hold the bills, to collect the sterling proceeds at maturity, and to re-convert these into Swiss francs at the same rate as was applied to the original purchase of sterling. From the London banker's point of view, this deal amounts to a sale of sterling bills, with the complication that he is to buy the Swiss banker's francs, and, on maturity of the bills, sell him the francs back at the same rate. Thus his quotation for the sale of the bills will be the ordinary market discount quotation, so adjusted as to allow the cost of the swap to be included.]

Assuming that the London banker is prepared to buy spot francs at 17·11 and to sell three months' forward at a premium of $2\frac{1}{2}$ c. on this rate, find the rate which he will quote to the Swiss banker if fine bank paper is quoted at $2\frac{3}{4}$ %, and he requires at least $\frac{1}{2}$ % in the bill rate for his profit. Show also the discount statement which he will forward to the Swiss banker.

Solution :—

The London banker agrees to take approximately £50,000 worth of Swiss francs at 17·11, and, at the end of three months, to sell them back at the same rate. But as this amounts to selling forward, he will charge the premium of $2\frac{1}{2}$ c. per three months or 9 c. p.a., on 1,711 c. This is equivalent to an annual

percentage of $\frac{900}{1711}$ or ·526.

The bank bills can be obtained at	..	..	..	2·5625 % p.a.
Less Swap Cost	..	..	..	·526
Profit	..	..	..	·03125
				·55725 „ „
				2·00525 „ „

∴ The London banker would offer to sell the bills at 2 % p.a.

His discount statement to the Swiss banker would take the following form:—

DISCOUNT STATEMENT.

As agreed, we have sold you to-day £50,000 fine bank bills as per schedule attached.

Total: bills maturing	..	..	..	..	19..	£50,000
Less .. days' discount @ 2 % p.a. (for the purpose of this question an exact three months is assumed)	..	..	..	..		250
Sterling cost of bill	..	..	..	..	..	<u>£49,750</u>

Please pay our agents the Banque of Zurich, the franc cost of these bills, viz., £49,750 @ 17·11 = Fcs. 851,222·50.

We hold the bills in portfolio in your name, and on the due date, viz., ..., 19.., we shall instruct our agents to pay you the sum of Fcs. 855,500, being the equivalent of £50,000 @ 17·11 as agreed.

Example 47.—Renewal of Currency Loan with Exchange Secured.

A German banker has borrowed \$100,000 from a London banker, and at maturity of the loan requests a three months' renewal. The London banker agrees to this on the basis of interest at 3 % p.a. plus "swap costs". If New

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York "spot" is either side of 3·31 and three months' forward dollars are quoted $\frac{1}{2}$ - $\frac{3}{4}$ c. discount, work out the cost of the swap, and the gross rate per cent. p.a. (to two places of decimals) on the loan.

[NOTE.—In order to provide the German banker with dollars, the London banker will have had to buy them himself, and will have sold them forward for delivery at the maturity of the loan. He will now have to make a fresh "swap" by buying spot dollars and selling "forward" against the renewal of the loan.]

Solution :—

The banker will buy spot and sell forward at a difference of $\frac{3}{4}$ c. against him.

The cost of the "swap" is $\frac{3}{4}$ c. for 3 months, or 3 c. p.a., on 3·31 c.

$$= \frac{300}{331} = \cdot 907 \% \text{ p.a.}$$

$$\begin{array}{r} \text{Add Interest Charged} \quad 3\cdot000 \% \text{ p.a.} \\ \hline 3\cdot907 \% \text{ p.a.} \end{array}$$

$\therefore$ Gross Percentage Cost is 3·91 % p.a. (approx.).

Example 48.—At what rate can a London banker lend French francs for 3 months if the spot rate is 80·25 and forward swaps are quoted at 15·10 c. premium? Allow the banker 2 % p.a. for loss of interest on his funds and a further $\frac{1}{2}$ % flat for expenses and profit.

Solution :—

The profit on his swap (buying francs spot and selling them forward) is 10 c. on Fcs. 80·25.

$$\begin{aligned} &= \frac{10}{8,025} \times \frac{100}{1} \times \frac{4}{1} \% \text{ p.a.} \\ &= \frac{1}{2} \% \text{ p.a. approximately.} \end{aligned}$$

Allowance for loss of interest	..	..	..	..	2 % p.a.
Expenses, $\frac{1}{2}$ % for 3 months, equivalent to	..	..	..	..	1 % p.a.
					<u>3 % p.a.</u>
Deduct Swap margin	..	..	..	..	$\frac{1}{2}$
Rate charged for loan	..	..	..	..	<u>2$\frac{1}{2}$ % p.a.</u>

Example 49.—Using the same figures as in the last example, give the answer if forward swaps had been 4·5 c. discount.

Solution :—

Swap cost (i.e., loss on swapping spot for forward)

$$= \frac{5}{8,025} \times \frac{100}{1} \times \frac{4}{1} = \frac{1}{2} \% \text{ p.a. approx.}$$

$$\begin{array}{r} \text{Add other expenses} \quad 3 \% \\ \hline \text{Rate charged for loan} \quad = \underline{3\frac{1}{2} \% \text{ p.a.}} \end{array}$$

Example 50.—Indirect cover of Purchase of Forward Florins.

A London banker buys from a customer 15,000 Dutch florins two months' forward. He is quoting a spot rate of 8·30 $\frac{1}{2}$ -31 $\frac{1}{2}$, and a forward rate of $\frac{1}{2}$ - $\frac{3}{4}$ c. premium per month. He can sell florins two months' forward in Paris at 1,024 and the Market is quoting francs in London at 84 $\frac{1}{2}$ - $\frac{1}{2}$ spot, two months' forward

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at par. Find (a) the amount with which the customer will be credited; and (b) the profit or loss accruing to the banker if he covers his purchase by means of a sale in Paris.

Solution :—

(a) The banker will buy the florins from the customer at the rate of $8.31\frac{1}{2}$ less $(2 \times \frac{1}{4})$ c. = $8.30\frac{1}{2}$.

He will therefore credit his customer with $\pounds \frac{15,000}{8.3075} = \pounds 1,805.597$
= $\pounds 1,805$ 11s. 11d.

(b) *By Chain Rule.*

? £ = Fls. 15,000
 if Fls. 100 = Fcs. 1,024

and Fcs. 84.5 (Market's buying price) = £1?

$$\frac{150 \times 1,024}{84.5} = \frac{153,600}{84.5}$$

= $\pounds 1,817.751$

	£	s.	d.
∴ Proceeds of an indirect sale <i>via</i> Paris..	..	1,817	15 0
Amount credited to customer	..	1,805	11 11
∴ Banker's Profit ..	..	<u>£12</u>	<u>3 1</u>

Calculation of Long Rates and "Tel Quel" Rates from Forward Rates.—Competition for business nowadays forces exchange dealers to quote the finest possible rates for any business offered to them, and often a better long rate or *tel quel* rate can be quoted by basing the calculation on the price at which the currency can be sold forward for the maturity of the bill, and on the loss of interest, at the home rate, on the sterling which must be paid at once for the bill.

If the foreign interest rate is lower than the home interest rate this method cannot be used unless the forward margin more than compensates for the difference in interest. If the foreign interest rate is higher than the home rate and the forward margin does not absorb all the difference (as it seldom does), then the method may be applied with advantage to the customer.

Suppose, for instance, a banker is asked to quote a rate for the purchase of a three months' date bill on Amsterdam at a time when the T.T. rate on Amsterdam is Fls. 8.15-20 to £1. Discount rate in Amsterdam is, say, 4 % p.a.; collecting commission is $\frac{1}{4}$ %, and Stamp duty, $\frac{1}{4}$ per mille.

In addition the following data are available: loan interest in London, 2 % p.a., forward quotation for three months' florins is 6-4 c. premium.

The banker has two alternatives. He can either send the bill forward, have it discounted, and sell T.T. against the proceeds, or he can hold the bill until maturity, and sell forward against the proceeds.

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(1) *Selling T.T. against Proceeds of Discount.*

In this case the basic rate is that at which the banker can sell T.T. to the Market, viz., 8·20. But he will require *more* florins from his customer, since he has to bear the cost of discount charges, collection commission and stamps. Hence he calculates as follows:—

Market buying rate	..	..	..	8·20
Add 3 months' Interest at $\frac{1}{2}$ %	..	..	..	·082
Commission, $\frac{1}{2}$ %	..	..	..	·01
Stamp duty, $\frac{1}{2}$ per mille	..	..	..	·004
				<u>8·296</u>

The best possible rate he could quote to his customer would therefore be 8·296, say, 8·30 florins per £1.

(2) *Selling three months' forward against Proceeds of Collection.*

In this case, the basic rate is that at which the banker can sell three months' forward florins to the Market. Actually, he would sell spot to the Market at 8·20 and effect a swap at a difference of ·04 in his favour, making the cost of his cover 8·20 less ·04 = 8·16. The banker holds the bill as an investment, but loses interest on his sterling during the three months at 2 % (the rate which he could otherwise obtain on his funds). He must therefore make an allowance in his rate for this loss of interest, i.e., he treats the transaction as an advance of sterling, with the exchange secured. In addition, he will have to recoup himself for stamp and collection charges.

It will be observed that by selling forward at once, the banker squares his position and avoids any loss through exchange fluctuation.

Market buying rate for spot	..	..	8·20
Less Premium on forward swap	..	..	·04
			<u>8·16</u>
Add 3 months' Interest at 2 %	..	..	·041
Commission, $\frac{1}{2}$ %	..	..	·01
Stamp duty, $\frac{1}{2}$ per mille	..	..	·004
			<u>8·215</u>

The best possible rate he could quote would be 8·215, say, 8·22 florins per £1.

To this rate he would, of course, add his allowance for profit.

A comparison of the two methods shows that, in the second case, the banker is able to quote for the bill at a much lower rate than in the first method. Consequently, where competition is keen the banker is obliged to consider both ways of covering, and to quote at the lower rate.

Example 51.—What rate would a bank dealer apply to a bill at 90 days' sight on New York (a) if he bases his calculation on the forward rate for dollars; (b) if he calculates in the usual way?

Assume that the London on New York T.T. rates are 4·84 $\frac{1}{2}$ –·85; discount in London is 5 %, in New York (for similar bills), 6 %; the three months' forward margin on New York is $\frac{1}{2}$ – $\frac{3}{4}$ c. discount; the cheque margin is $\frac{1}{2}$ c. discount, and the time of transit to New York, 8 days.

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Solution :—

" Tel quel " rate based on Forward Price.

Market T.T. rate (buying)	\$4·85
Allow 3 months' forward margin, $\frac{1}{2}$ c. + 8 days, say, $\frac{1}{2}$ c. ..	·008125
	<u>\$4·858125</u>
Interest on the sterling for 98 days @ 5 %, London terms (365 days)	·06521
	<u>\$4·923335</u>

∴ Neglecting stamps, brokerage and profit, rate to be applied is, say, \$4·92 $\frac{1}{2}$ per £1.

[NOTE.—It is assumed that the discount rate of 5 % in London represents the yield which the London banker could have obtained on his sterling funds.]

" Tel quel " rate based on Spot Rate and Foreign Interest.

T.T. rate	\$4·85
Cheque margin (allowance for time in transit)	·00375
	<u>\$4·85375</u>
Interest for 90 days @ 6 %, New York terms (360) days	·072806
	<u>\$4·926556</u>

∴ Neglecting extras as above, rate to be applied is, say, \$4·92 $\frac{1}{2}$ per £1.

If the purchase is made on the basis of the first method, the banker must be prepared to hold the bill until maturity, since, if he were pressed for funds and was compelled to re-discount during the bill's currency, he would, of course, have to re-discount in New York at 6 % p.a., and, by so doing, he would lose part of the difference between the New York interest rate and the London interest rate *plus* the forward margin.

Example 52.—A banker has to quote competitively for a three months' bill, on Spain when the Market is quoting:—

Spot pesetas	40 $\frac{1}{2}$ - $\frac{1}{2}$
3 months' forward	$\frac{1}{4}$ - $\frac{1}{2}$ peseta discount
Discount rate in Madrid	6 $\frac{1}{2}$ %
Loan interest in London	5 %
Stamp duty	$\frac{1}{4}$ %
Commissions and profit	$\frac{1}{4}$ %

What price will he offer for the bill ?

Solution :—

The banker can consider the bill from two angles:—

- (1) He may build up a long rate in the ordinary way on the assumption that he sells spot and re-discounts the bill at once in Madrid. In this case he can quote:—

Short Rate (he covers by <i>selling</i> spot) ..	40·375
Plus Commission at $\frac{1}{4}$ %	·10094
Stamps at $\frac{1}{4}$ %	·02019
Discount abroad, 3 months at 6 $\frac{1}{2}$ % ..	·65609
	<u>41·15222</u>

He can quote 41 $\frac{1}{2}$ pesetas per £1.

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(2) He can consider the transaction as merely being a loan of sterling, having first secured the forward rate by selling the proceeds forward.

In this case he can sell spot at 40.375 and effect a swap at a difference of $\frac{1}{2}$ peseta against him.

Spot rate	..	..	..	..	40.375
Add Forward margin	..	..	..	..	.500
Stamps	..	..	..	..	.02044
Commission	..	..	..	..	.10219
Interest (on sterling advances) 3 months at 5 %	..	..	..	..	.51094
					<u>41.50857</u>

As this rate is *less competitive* than that obtained by the first method, the banker will quote the first rate, i.e., 41 $\frac{1}{2}$ pesetas per £1, for the business.

Example 53.—On 28th September, 1932, a customer asks you to negotiate a bill on Amsterdam for Fls. 9,327.75, due 30th December, 1932. From the following data calculate (a) the rate of exchange, to the nearest $\frac{1}{2}$ c., at which the bill should be negotiated, and (b) the amount of sterling with which you should credit the customer:—

T.T. rate London on Amsterdam	..	..	..	8.36 $\frac{1}{2}$ — $\frac{1}{2}$
3 months' forward (for 30th December)	..	..	..	$\frac{1}{2}$ —1 c. discount
Discount rate for 3 months' commercial bills in London				2 $\frac{1}{2}$ % p.a.
Discount rate for 3 months' commercial bills in Amsterdam	..	..	..	2 $\frac{1}{2}$ % p.a.
Dutch stamp	..	..	..	$\frac{1}{2}$ per mille
Bankers' profit	..	..	..	$\frac{1}{2}$ per mille

(Take the period as being exactly one-quarter of a year.) (*Institute of Bankers, 1934.*)

Solution :—

(a) (i) *Basing Long Rate on Forward cover :—*

Market buying rate for T.T.	..	..	Fls. 8.365
Add 3 months' forward margin	..	..	.01
Bankers' profit and stamp-duty, 1 per mille	..	..	.0084
Interest, 3 months at 2 $\frac{1}{2}$ % p.a.	..	..	.0523
			<u>Fls. 8.4357</u>

(ii) *Basing Long Rate on Re-discount :—*

Market buying rate for T.T.	..	..	Fls. 8.365
Add Interest, 3 months @ 2 $\frac{1}{2}$ % p.a.	..	..	.0575
Bankers' profit and stamp-duty, 1 per mille	..	..	.0084
			<u>Fls. 8.4309</u>

As the second method produces the most competitive rate, the banker will negotiate the bill at this rate, say, Fls. 8.43 $\frac{1}{2}$.

(b) Proceeds of bill, converted at Fls. 8.43125

$$\begin{aligned}
 &= \frac{9,327.75}{8.43125} \\
 &= \underline{\underline{£1,106 \text{ 6s. 7d.}}}
 \end{aligned}$$

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Example 54.—You are asked to quote a competitive rate for the purchase from a customer of a 90 d/s bill on San Francisco for \$5,000. T.T. New York is quoted in London at \$4·66 $\frac{1}{2}$ — $\frac{1}{4}$ and 3 months' forward at 1 $\frac{1}{4}$ —1 c. premium. The charge for transfers of funds from San Francisco to New York is $\frac{1}{16}$ c. per £1.

If sterling can be used for 90 days in London at 3 $\frac{1}{2}$ % p.a., and the discount rate in New York is 3 % p.a., what is the best rate you can quote?

Take 360 days to the year, and allow yourself $\frac{1}{16}$ c. profit in the rate. Ignore stamps and expenses.

Solution :—

LONG RATE BASED ON NEW YORK T.T. RATE AND U.S. DISCOUNT RATE.

T.T. rate	..	..	..	..	..	..	..	\$4·6625
Add Discount 90 days at 3 %	..	..	..	..	..	..	..	·034969
Transfer charge, $\frac{1}{16}$ c.	..	..	..	..	..	..	..	·000625
Profit, $\frac{1}{16}$ c.	..	..	..	..	..	..	..	·000625
								<u>\$4·698719</u>

∴ The best rate would be \$4·69 $\frac{7}{8}$ (to nearest $\frac{1}{8}$ c.).

LONG RATE BASED ON THE FORWARD RATE.

T.T. rate	..	..	..	..	..	..	..	\$4·6625
Less Premium on forward swap	..	..	..	..	..	..	..	·01
								<u>4·6525</u>
Add Loss of Interest, 90 days at 3 $\frac{1}{2}$ % (on 4·6625)	..	..	..	..	..	..	..	·040797
Transfer charge, $\frac{1}{16}$ c.	..	..	..	..	..	..	..	·000625
Profit, $\frac{1}{16}$ c.	..	..	..	..	..	..	..	·000625
								<u>\$4·694547</u>

∴ The best rate would be \$4·69 $\frac{1}{2}$.

Hence, the finest competitive rate which the dealer could quote would be \$4·69 $\frac{1}{2}$ per £, based on a forward sale of the dollars.

The Short-Swap Margin.—The margin between the M.T. (or cheque) rate and the T.T. rate is often based on the “short swap” margin. For example, if the margin for forward dollars is very wide, the spread between cheque and T.T. based purely on interest rates may show a divergence from current conceptions as to the worth of dollars payable ten days ahead. In some cases, the cheque rate tends to move towards a point which will reflect the wide margin of the forward quotations, since it is possible for a banker who *sells* a cheque on New York to cover by buying T.T. and then to swap his spot dollars for dollars deliverable in, say, ten days. By so doing, he neither suffers nor gains any loss of interest in New York, but he gains interest on his sterling in London and must also allow for the “difference” paid or received on the swap. Conversely, a banker who *buys* cheque on New York can cover by selling T.T. and then buying spot against a sale ten days forward: by so doing, he neither gains nor loses interest in New York

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but must allow for the loss of interest on the sterling paid for the cheque and also for the swap margin.

The following example will illustrate this more clearly:—

Example 55.—A banker is willing to deal in T.T. New York at $4\cdot49\frac{3}{4}-\cdot50$. Forward dollars are at a premium of $2-1\frac{1}{2}$ c. for one month, $6-4\frac{1}{2}$ c. for three months. Interest in New York is 4 % on overdrawn accounts. In London money is usable at 2 %. At what rate will the banker buy cheque on New York ?

Solution :—

(a) Cheque rate based on overdraft interest:—

Banker's buying rate for T.T.	..	..	..	..	\$4·50
Plus Interest for 10 days @ 4 %	..	..	..	..	·005
Buying rate for cheques	..	..	..	..	<u>\$4·50½</u>

(b) Cheque rate based on forwards:—

Spot	..	..	..	..	..	4·50
Less 10 days forward (say $\frac{1}{3}$ rd of $1\frac{1}{2}$ c.)	..	..	..	..	..	·005
						<u>4·495</u>
Add Interest on sterling paid for cheque now (10 days at 2 %)	..	..	..	..	..	·0025
						<u>4·4975</u>

The rate will probably tend to be nearer $4\cdot49\frac{3}{4}$ rather than $4\cdot50\frac{1}{2}$, i.e., the banker can quote a competitive rate based on the short-swap margin.

CHAPTER XXXI

MISCELLANEOUS PROBLEMS ON THE EXCHANGES

THE following worked examples, some of which have been chosen from past examination papers, are designed to afford the reader a variety of problems for study and practice.

In certain cases, exchange quotations which are now obsolete are included in the examination questions reproduced, but these have not been altered as no change of principle is involved.

Unless otherwise stated, the reference "*Inst. of Bankers*" at the end of certain questions refers to the English Institute, and the two Parts of the Associate Examination of that Institute are indicated by the abbreviations "I" and "II" respectively.

Eastern Currencies.

Example 1.—Find equivalent in taels of £217 10s. 6d. @ 2s. 6½d. per tael.

Solution :—

$$\begin{array}{rcl}
 £217 \text{ 10s. 6d.} & = & 217 \cdot 525 \\
 2\text{s. } 6\frac{1}{2}\text{d.} & = & \cdot 128125 \\
 \text{No. of taels} & = & \frac{217 \cdot 525}{\cdot 128125} \\
 & & 12'8'1'2'5)217525(1697 \cdot 75 \\
 & & \underline{89400} \\
 & & 12525 \\
 & & \underline{994} \\
 & & 97 \\
 & & \underline{7} \\
 & & \underline{1,697 \cdot 75 \text{ taels.}}
 \end{array}$$

Example 2.—A banker sells his customer T.T. on Bombay for Rs. 500,000 at 1s. 6½d. and covers by buying a T.T. for Rs. 300,000 at 1s. 6½d. and a cheque for Rs. 200,000 at 1s. 6d. Allowing interest on his overdraft in Bombay at 6 per cent., calculate his profit. Mailing period is 21 days.

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Solution :—

Proceeds of Rs. 500,000 at ls. 6½d.

	£	s.	d.	£	s.	d.
Rs. 500,000 @ 1s.	25,000	0	0			
@ 3d.	6,250	0	0			
@ 3d.	6,250	0	0			
@ ½d.	520	16	8			
				<u>38,020</u>	<u>16</u>	<u>8</u>

Cost of Rs. 300,000 @ 1s. 6½d.

	£	s.	d.	£	s.	d.
Rs. 300,000 @ 1s.	15,000	0	0			
@ 3d.	3,750	0	0			
@ 3d.	3,750	0	0			
@ ½d.	156	5	0			
				<u>22,656</u>	<u>5</u>	<u>0</u>

Cost of Rs. 200,000 @ 1s. 6d.

	£	s.	d.			
Rs. 200,000 @ 1s.	10,000	0	0			
@ 6d.	5,000	0	0			
				<u>15,000</u>	<u>0</u>	<u>0</u>
Interest on £15,000, for 21 days at 6 %				<u>51</u>	<u>15</u>	<u>8</u>
Total cost				<u>£37,708</u>	<u>0</u>	<u>8</u>

Profit = £38,020 16s. 8d. minus £37,708 0s. 8d.

= £312 16s.

Example 3.—Standard silver in London is worth 3s. 6d. per oz. troy. If a rupee contains $\frac{3}{4}$ oz. of silver, $\frac{1}{11}$ ths fine, find the metallic parity between a sovereign and a rupee.

Solution :—

? Rupees = £1

£1 = 20s.

3·5s. = $\frac{3}{4}$ oz. of fine silver

Oz. fine silver $\frac{3}{4} \times \frac{1}{11}$ = 1 rupee

$\frac{20 \times 37 \times 96}{40 \times 3 \cdot 5 \times 33}$

= 15·376 rupees

= 15 rupees 6 annas.

NOTE.—Answers expressed in Indian currency should always be given in rupees and annas, and not in decimal form.

Example 4.—A London banker buys a cheque on Bombay for Rs. 100,000 at a rate of 1s. 6½d. Against it he sells T.T. at 1s. 6½d. for delivery in 21 days, i.e., at approximately the date when the proceeds of the cheque will be credited to him. Calculate the profit and the yield on his money.

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Solution :—

Cost of Rs. 100,000 @ 1s. 6½d.

	£	s.	d.	£	s.	d.
Rs. 100,000 @ 1s.	5,000	0	0			
@ 3d.	1,250	0	0			
@ 3d.	1,250	0	0			
@ ½d.	104	3	4			
				7,604	3	4

Proceeds of Rs. 100,000 @ 1s. 6¾d.

	£	s.	d.			
Rs. 100,000 @ 1s.	5,000	0	0			
@ 3d.	1,250	0	0			
@ 3d.	1,250	0	0			
@ ¾d.	156	5	0			
				7,656	5	0
Banker's profit				£52	1	8

$$\text{Yield is } \frac{£52 \text{ 1s. 8d.}}{£7604 \text{ 3s. 4d.}} \times \frac{365}{21} \times \frac{100}{1} \text{ per cent. p.a.}$$

$$= \underline{\underline{11.9 \text{ per cent. p.a.}}}$$

Example 5.—A Bombay merchant owes Paris Fcs. 10,000, and a bill on Paris can be obtained @ 2.5 as. per franc. If exchange on London is 2s. 6d., and London quotes Paris at Fcs. 50.5, which is the best way of payment, direct or via London? Neglect charges.

Solution :—

Payment direct costs 25,000 as. = Rs. 1,562.5

Indirect.

? Rupees = 10,000 francs

50.5 = 20s.

2.5 = 1 rupee

= Rs. 1,584.15

Payment direct is therefore cheaper by

Rs. 21.65

i.e., 21 rupees 10 annas.

Example 6.—If Rs. 8.5 = £1, and a Shanghai tael is worth 8s. 3d., how many rupees must be sent from Calcutta to Shanghai to pay a debt of 1,000 taels?

Solution :—

? Rupees = 1,000 taels

1 tael = £.4125

£1 = Rs. 8.5

= 8.5 × 412.5

= 3,506 rupees 4 annas.

Example 7.—For what amount would you issue a draft on Lucknow in rupees, against payment of £526 18s. 7d., the rupee rate being 1s. 3¾d.? In your calculations make an allowance of ¼ per cent. commission paid by the customer. (*Inst. of Bankers, I, 1922.*)

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Solution :—

$$\begin{aligned}
 &£526 \text{ 18s. 7d.} = £526.929 \\
 &\text{Deduct charges } \frac{1}{8} \text{ per cent.} = \frac{.329}{526.600} \\
 &\text{Rate of exchange} = 1\text{s. } 3\frac{1}{4}\text{d.} = 15.843\text{d.} \\
 \therefore \text{Amount of draft} &= \frac{526.6 \times 240}{15.843} = \frac{42128.0}{5.281} \\
 &= \underline{7,977 \text{ rupees.}}
 \end{aligned}$$

Example 8.—The basis of exchange between Japan and London is, by general consent, the rate for telegraphic transfers on London, and in practice the demand rate is based on the T.T. rate. Given a rate for telegraphic transfers, Kobe on London, 2s. 1½d. per yen, find the rate of exchange for demand bills. (Time of mail 45 days; London discount rate 3½ %.) (*Inst. of Bankers, II, 1924.*)

Solution :—

The rate for T.T. Kobe on London is 2s. 1½d. Demand bills will be cheaper, and the rate must therefore be adjusted by adding interest at 3½ per cent. for 45 days :—

$$\begin{aligned}
 &\text{T.T. rate Kobe on London, 2s. 1½d.} = 25.75\text{d.} \\
 &45 \text{ days' interest at } 3\frac{1}{2} \% \\
 &\frac{25.75 \times 7 \times 45}{73000} = \frac{8111.25}{73000} \\
 &\cdot 0811125 \text{ (}\frac{1}{1000000}\text{th)} \\
 &\cdot 0270375 \text{ (}\frac{1}{4}\text{ of above)} \\
 &\cdot 0027037 \text{ (}\frac{1}{10}\text{ of above)} \\
 &\cdot 0002704 \text{ (}\frac{1}{10}\text{ of above)} \\
 &\hline
 &\cdot 1111241 \\
 &\cdot 00001 \text{ (less } \frac{1}{10000}\text{ of total)} \\
 &\hline
 &\cdot 1111141
 \end{aligned}$$

$$\begin{aligned}
 &= \frac{\cdot 1111}{25.8611\text{d.}} \\
 &= \underline{2\text{s. } 1\frac{1}{4}\text{d.}}
 \end{aligned}$$

Example 9.—If exchange Shanghai on Hong Kong is quoted at 73.33 taels for \$100, and Hong Kong on India is quoted at \$100 for 137½ rupees, and the sterling quotation for rupees is 1s. 4d., what is the sterling value of the tael? Chain rule may be used to arrive at the result. (*Inst. of Bankers, II, 1922.*)

Solution :—

$$\begin{aligned}
 &\text{How many pence} = 1 \text{ tael} \\
 &\quad \text{if } 73.33 \text{ taels} = 100 \text{ dollars} \\
 &\quad \text{if } 100 \text{ dollars} = 137\frac{1}{2} \text{ rupees} \\
 &\quad \text{and } 1 \text{ rupee} = 16\text{d. ?} \\
 &\frac{100 \times 275 \times 16}{73.33 \times 100 \times 2} = \frac{2200}{73.33} \\
 &= 30.001 \\
 &= \underline{2\text{s. } 6\text{d.}}
 \end{aligned}$$

Example 10.—An Indian customer sends to you from Bombay a 90 days' sight bill for £30,000, with instructions to get the bill discounted on the London market immediately after acceptance, and then to remit the proceeds by telegraphic transfer to Bombay. Show the amount of the proceeds obtained in London (Bank rate 5½ %, stamp duty 1s. per £100, your commission ¼ %), and the sum, in rupees, remitted to India. Rate for remitting proceeds to Bombay, 1s. 3¼d. per rupee. (*Inst. of Bankers, II, 1922.*)

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Solution :—

Amount of bill	=	£30,000 0 0
Less 92 * days' interest at $5\frac{1}{2}\%$	=	£415 17 10
Stamp duty, 1s. %	=	15 0 0
Commission, $\frac{1}{2}\%$	=	75 0 0
		505 17 10

Proceeds to be remitted to Bombay £29,494 2 2

$$\text{Amount in rupees} = \frac{29494 \cdot 1083 \times 240 \times 4}{63}$$

$$= \underline{\underline{4,49,434 \text{ rupees.}}}$$

* 90 days' sight plus three days' grace less one day allowed for acceptance. The bill would be left with the drawees for acceptance, picked up the next day and discounted at once. But, as the acceptance will be dated as from the day of sighting, one day of the usance will have run when the bill is discounted.

Example 11.—A banker in Shanghai sells T.T. on London at 2s. 4d., and covers his sales by purchasing 4 months' bills at 2s. 4½d. If London discount rate is 4 %, what is his net profit per cent. on the transaction? Assuming that a month elapses between the time of drawing the T.T. and arrival of the bills in London, what rate per cent. per annum is earned? Allow brokerage @ $\frac{1}{8}\%$, and stamp @ $\frac{1}{2}$ per mille.

Solution :—

$\frac{3}{4}$ d. on 2s. 4d. = £2 4s. 8d. per cent.,	£	s.	d.
∴ Gross profit per cent. = ...	..	2	4 8
	£	s.	d.
Less 4 months' discount @ 4 %	1	6	8
Brokerage @ $\frac{1}{8}\%$	2	6	
Stamp $\frac{1}{2}$ per mille	1	0	
			1 10 2
Net profit per cent.			
			14 6

This profit is made in a transaction covering one month,

$$\begin{aligned} \therefore \text{Rate per annum} &= 14s. 6d. \times 12 \\ &= \underline{\underline{£8 14s. \text{ per cent.}}} \end{aligned}$$

Example 12.—Find the amount realised in pence per tael by purchasing silver .994 fine in Shanghai at 111·10 taels currency per 100 taels weight and selling it in London at 24d. per oz. standard (.925 fine). Allow for charges at $\frac{1}{2}\%$. (1 tael weighs 579·84 grains.)

Solution :—

$$\begin{aligned} ? \text{ pence} &= 1 \text{ tael} \\ \text{if } 111\cdot10 \text{ taels currency} &= 100 \text{ taels weight} \\ 1 \text{ tael weight} &= 579\cdot84 \text{ grains } \cdot 994 \text{ fine} \\ \cdot 925 \text{ grain fine} &= 1 \text{ grain standard} \\ 480 \text{ grains standard} &= 24 \text{ pence?} \\ \therefore \text{Amount realised in pence per tael, neglecting charges} \end{aligned}$$

$$= \frac{100 \times 579\cdot84 \times \cdot 994 \times 24}{111\cdot10 \times \cdot 925 \times 480}$$

$$= 28\cdot042d.$$

$$\text{Less charges @ } \frac{1}{2}\% \quad \dots = \underline{\underline{\cdot 210}}$$

$$\text{Amount realised} \quad \dots = \underline{\underline{27\cdot832d. \text{ per tael.}}}$$

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Premium or Discount.

As is pointed out on page 111, the currency unit of one country is frequently referred to as being at a *premium* or at a *discount* in another centre, i.e., when compared with the currency of that centre. Thus, the franc may be at a discount of, say, 15 % in New York, while the dollar may be at a premium of, say, 4 % in London.

This premium or discount can be calculated by expressing the current value of the currency unit concerned (as expressed in the current quotation) as a percentage of its normal or Mint Par value. If this percentage is above 100, the excess represents the premium on the currency; while if the percentage is below par, the deficit represents the discount on the currency concerned.

Example 13.—Sterling and dollar in New York.

In New York, London is quoted at 4.75. (a) At what premium or discount per cent. does sterling stand in relation to the dollar if the Mint Par is 4.8665? (b) What is the premium or discount per cent. on the dollar in New York in terms of sterling?

Solution :—

$$\begin{aligned} \text{(a)} \quad & \text{Current value of £1} = \$4.75 \\ & \text{Par value of £1} = \$4.8665 \\ \therefore \text{Current value} &= \frac{4.75}{4.8665} \times \frac{100}{1} \% \text{ of par value.} \\ &= 97.6 \% \text{ of par value.} \end{aligned}$$

$\therefore$ Sterling is at a discount of 2.4 % in terms of dollars.

$$\begin{aligned} \text{(b) Current sterling value of \$1} &= \frac{£1}{4.75} \\ \text{Par value of \$1} &= \frac{£1}{4.8665} \\ \therefore \text{Current value} &= \frac{\frac{1}{4.75} \times 100}{\frac{1}{4.8665}} \% \text{ of par value.} \\ &= \frac{4.8665 \times 100}{4.75} \% \text{ of par value} \\ &= 102.45 \% \text{ of par value.} \end{aligned}$$

$\therefore$ Dollar in New York stands at a premium of 2.45 % in terms of sterling.

Example 14.—Rupees in London.

In London, T.T. on Bombay is quoted at 18½⁵/₈. What is the premium or discount per cent. on rupees in relation to sterling if the parity is 18d.?

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Solution :—

Current value of 1 Rupee = 18·3125d.

Par value of 1 Rupee = 18d.

$$\begin{aligned}\therefore \text{Current value} &= \frac{18 \cdot 3125}{18} \times \frac{100}{1} \% \text{ of par value} \\ &= 101 \cdot 74 \% \text{ of par value.}\end{aligned}$$

$$\therefore \text{Premium on rupees} = \underline{1 \cdot 74 \%}.$$

Example 15.—The Franc in London.

Prior to the devaluation of the franc in 1928, the London T.T. rate on Paris stood at 124·5. What was the discount on the franc in London, if the Mint Par was 25·2215 per £?

Solution :—

$$\text{Current value of 1 franc} = \pounds \frac{1}{124 \cdot 5}$$

$$\text{Par value of 1 franc} = \pounds \frac{1}{25 \cdot 2215}$$

$$\begin{aligned}\therefore \text{Current value of 1 franc} &= \frac{\frac{1}{124 \cdot 5} \times 100}{\frac{1}{25 \cdot 2215}} \% \text{ of par value} \\ &= \frac{25 \cdot 2215 \times 100}{124 \cdot 5} \% \\ &= 20 \cdot 26 \% \text{ of par value.}\end{aligned}$$

$$\therefore \text{Francs were at a discount of } \underline{79 \cdot 74 \%} \text{ in relation to sterling.}$$

Example 16.—Sterling in Paris.

In Paris, London is quoted at 125·15. If the Mint Par is 124·2134, what is the premium or discount per cent. on sterling?

Solution :—

$$\text{Current value of £1} = \text{Fcs. } 125 \cdot 15$$

$$\text{Par value of £1} = 124 \cdot 2134$$

$$\begin{aligned}\therefore \text{Current value} &= \frac{125 \cdot 15}{124 \cdot 2134} \times 100 \% \text{ of par value} \\ &= 100 \cdot 75 \%\end{aligned}$$

$$\therefore \text{Sterling in Paris stands at a premium of } \underline{0 \cdot 75 \%}.$$

Example 17.—Dollars and Sterling in London.

If the London quotation for dollars is \$3·25 per £, find (a) the discount on sterling in terms of dollars, and (b) the premium on dollars in terms of pounds, assuming the Mint Par to be 4·8665.

Solution :—

$$(a) \quad \text{Current value of £1} = \$3 \cdot 25$$

$$\text{Par value of £1} = \$4 \cdot 8665$$

$$\begin{aligned}\therefore \text{Current value of £1} &= \frac{3 \cdot 25}{4 \cdot 8665} \times \frac{100}{1} \% \text{ of par value} \\ &= 66 \cdot 78 \% \text{ of Mint Par value.}\end{aligned}$$

$$\therefore \text{Discount on sterling} = \underline{33 \cdot 22 \%}.$$

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$$\begin{aligned}
 (b) \quad \text{Current value of \$1} &= \text{£} \frac{1}{3.25} \\
 \text{Par value of \$1} &= \text{£} \frac{1}{4.8665} \\
 \therefore \text{Current value of \$1} &= \frac{\frac{1}{3.25} \times 100}{\frac{1}{4.8665}} \% \text{ of par value.} \\
 &= \frac{4.8665 \times 100}{3.25} \% \\
 &= 149.74 \% \text{ of par value.} \\
 \therefore \text{Premium on dollars} &= \underline{49.74 \%}.
 \end{aligned}$$

Example 18.—Sterling and the Peso.

Exchange between London and Buenos Aires stands at $47\frac{1}{2}$. What is the premium on sterling and the discount on the peso if the Mint Par is 47.577d. per peso?

Solution :—

(a) PREMIUM ON STERLING.

$$\begin{aligned}
 \text{Par value of £1} &= \frac{240}{47.577} \text{ pesos} \\
 \text{Current value of £1} &= \frac{240}{47.5} \text{ pesos} = \frac{47.577 \times 100}{47.5} \% \text{ of Mint Par} \\
 &= 100.1621 \%. \\
 \therefore \text{Premium on sterling} &= \underline{.1621 \%}. *
 \end{aligned}$$

(b) DISCOUNT ON THE PESO.

$$\begin{aligned}
 \text{Par value of 1 peso} &= 47.577\text{d.} \\
 \text{Current value of 1 peso} &= 47.5\text{d.} = \frac{47.5 \times 100}{47.577} \% \text{ of Mint Par} \\
 &= 99.8382 \%. \\
 \therefore \text{Discount on peso} &= \underline{.1618 \%}. *
 \end{aligned}$$

Example 19.—Sterling in Buenos Aires.

English money being at a discount of 35 % in Buenos Aires, what is the approximate rate of exchange if the par is 47.58 pence? What is the cost of a bill on London for £1,000?

Solution :—

$$\begin{aligned}
 \text{Par value of peso} &= 47.58 \text{ pence.} \\
 \text{Current value of peso} &= \frac{47.58 \times 100}{65} \\
 &= \underline{73.2 \text{ pence.}} * \\
 \therefore \text{Exchange Rate} &= 73.2 \text{ pence per peso.} \\
 \text{Cost of £1,000 bill on London} &= \frac{1000 \times 240}{73.2} \text{ pesos} \\
 &= \underline{3278.7 \text{ pesos.}} *
 \end{aligned}$$

* The rates and amounts refer to *gold* pesos.

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Example 20.—(1) If on a certain date the New York rate on Amsterdam is \$40·28 for 100 florins, and on the same date the London rate on Amsterdam is 8·45, what is the parity between dollars and sterling?

(2) Assuming that sterling is actually quoted in New York at about the parity calculated above, at what premium or discount does sterling stand in relation to dollars, the mint parity being taken as \$4·8665?

Solution :—

$$\begin{aligned}
 (1) \quad & \text{How many dollars} \quad = \text{£1} \\
 & \quad \quad \quad \text{if £1} = 8\cdot45 \text{ florins} \\
 & \quad \quad \quad 100 \text{ florins} = \$40\cdot28? \\
 & \quad \quad \quad = \frac{40\cdot28 \times 8\cdot45}{100} \text{ dollars.} \\
 & \therefore \text{Parity rate is } 3\cdot4037 \text{ dollars} = \text{£1.}
 \end{aligned}$$

$$\begin{aligned}
 (2) \text{ Present value of £1 (at parity rate)} &= \$3\cdot4037 \\
 \text{Mint Par value of £1} &= \$4\cdot8665 \\
 \therefore \text{Present value} &= \frac{3\cdot4037}{4\cdot8665} \times 100 \% \text{ of par value.} \\
 &= 69\cdot96 \% \text{ of par value.} \\
 \therefore \text{Sterling is at a discount of } 30 \% &\text{ (approximately).}
 \end{aligned}$$

Premium or Discount and Forward Rates.

The *margin* at which a forward rate is quoted is, of course, a premium or discount on the spot rate, but it is expressed in the form of an *absolute* (as distinct from a *percentage*) premium or discount.

Thus, when spot dollars are quoted at \$4·25 = £1, forward may be quoted at a discount of, say, 2 cents. This is very different from a discount of 2 *per cent.*, for it means that forward dollars are quoted at \$4·25 + ·02 = \$4·27.

If the discount were 2 *per cent.*, the absolute margin would be:—

$$\frac{2}{100} \times \frac{4\cdot25}{1} = \$\cdot08\frac{1}{2}, \text{ or } 8\frac{1}{2} \text{ cents.}$$

The margin of 2 cents represents a *percentage* discount of:—

$$\frac{\cdot02}{4\cdot25} \times \frac{100}{1} = \cdot47 \text{ per cent.}$$

It will be seen that there is a wide difference between the two margins.

Appreciation or Depreciation.

An exchange rate or currency unit is frequently referred to as having appreciated or depreciated by a given amount per cent. This percentage appreciation or depreciation is calculated in exactly the same way as premium or discount by a comparison of the current

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value of the unit we are considering with its normal (or Mint Par) value, *in terms of the other currency.*

Example 21.—The Franc in London.

The franc in London moves from 25 to 125. What is the percentage depreciation?

Solution :—

$$\text{Original value of 1 franc} = \pounds \frac{1}{25}$$

$$\begin{aligned}\text{Current value of 1 franc} &= \pounds \frac{1}{125} = \frac{25}{125} \times 100 \% \text{ of original value.} \\ &= 20 \% \text{ of original value.}\end{aligned}$$

$$\therefore \text{Percentage depreciation} = \underline{80 \%}.$$

Example 22.—Sterling and the Dollar.

Exchange between London and New York moves from 4.8668 to 4.695. What is the percentage depreciation of sterling and the percentage appreciation of the dollar?

Solution :—

(a) DEPRECIATION OF STERLING.

$$\text{Original value of } \pounds 1 = \$4.8668$$

$$\begin{aligned}\therefore \text{Current value of } \pounds 1 &= \$4.695 = \frac{4.695 \times 100}{4.8668} \% \text{ of original value.} \\ &= 96.5 \%\end{aligned}$$

$$\therefore \text{Depreciation of sterling} = \underline{3.5 \%}.$$

(b) APPRECIATION OF THE DOLLAR.

$$\text{Original value of } \$ = \pounds \frac{1}{4.8668}$$

$$\begin{aligned}\therefore \text{Current value of } \$1 &= \pounds \frac{1}{4.695} = \frac{4.8668 \times 100}{4.695} \% \text{ of original value.} \\ &= 103.7 \%\end{aligned}$$

$$\therefore \text{Appreciation of the dollar} = \underline{3.7 \%}.$$

Premium on Gold.

Example 23.—Suppose the sovereign is equal to 20 gold dollars of a certain country, but that the currency of the latter country has become inconvertible and gold is at a premium of 200 per cent. What is the current value of the sovereign?

Solution :—

100 gold dollars are equal to 300 paper dollars,

$$\therefore 1 \text{ gold dollar} = \frac{300}{100} = 3 \text{ paper dollars.}$$

$\therefore$ If $\pounds 1 = 20$ gold dollars,

It must $= 20 \times 3$ paper dollars $= \underline{60 \text{ paper dollars.}}$

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Example 24.—

Mint Par between England and Turkey = Pstrs. 110 per £1.

Premium on gold in Turkey = 810 %.

What is the current value of the gold sovereign ?

Solution :—

$$100 \text{ gold pstrs.} = 910 \text{ paper pstrs.}$$

$$\therefore 1 \text{ gold pstr.} = \frac{910}{100} \text{ paper pstrs.}$$

$$\text{But } £1 = 110 \text{ gold pstrs.}$$

$$\therefore £1 = \frac{110 \times 910}{100}$$

$$= \underline{1,001 \text{ paper piastres.}}$$

Example 25.—If gold is at a premium of 810 % in Turkey, what is the discount at which the paper piastre stands in relation to the gold piastre ?

Solution :—

$$\text{At 810 \% premium } 100 \text{ gold pstrs.} = 910 \text{ paper piastres.}$$

$$\text{Present value of 1 paper piastre} = \frac{100}{910} \text{ piastres gold.}$$

$$\text{Normal value of 1 paper piastre} = 1 \text{ piastre gold.}$$

$$\therefore \text{Present value of paper piastre} = \frac{100 \times 100}{910} \% \text{ of normal value.}$$

$$= 11 \% \text{ (approx.).}$$

$$\therefore \text{Paper piastre stands at } \underline{89 \% \text{ discount (approx.).}}$$

Example 26.—If the ratio between the Argentine paper peso (the circulating medium within the country) and the gold peso is legally fixed at 44 c. gold = 1 peso paper, what is the premium on gold ?

Solution :—

$$44 \text{ pesos gold} = 100 \text{ pesos paper.}$$

$$\therefore 100 \text{ pesos gold} = \frac{100 \times 100}{44} \text{ pesos paper.}$$

$$= 227.27 \text{ pesos paper.}$$

$$\text{Premium on gold} = \underline{127.27 \text{ per cent.}}$$

Miscellaneous Problems.

Example 27.—A broker in London bought a cheque on Melbourne at $2\frac{1}{2}\%$ discount, and sold it at $1\frac{1}{2}\%$ premium. Find the gain per cent. on the outlay. If the amount of the bill was £1,000, what is the actual gain if the broker borrows money from a bank at 4 % and one month elapsed between the purchase and sale ?

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Solution :—

£100 bill on Australia costs £97½
 £100 bill on Australia sells @ £101½
 ∴ Gain on £97½ (outlay) = 3½
 ∴ Gain on £100 (outlay) = $\frac{15}{4} \times \frac{100 \times 2}{195}$
 = 3.846.
 Say, 3½ %.

The £1,000 bill costs	£975
The £1,000 bill sells for	£1,012·5
∴ Actual gain	= £37·5
<i>Deduct</i> interest on £975 for	
1 month @ 4 %	.. 3·25
Net gain	.. <u>£34·25</u>
	= £34 5s.

Example 28.—On 5th February, 1920, you receive an order to remit bills drawn on Paris @ 48·50, Brussels @ 48·40, or Amsterdam @ 9·10, or the nearest rate. On going into the market the quotations are: Paris 48·25–30, Brussels 48·15–20, Amsterdam 8·72–75; which rate would you choose and why?

Solution —

All rates are worse for buying, as they have all fallen:—

Paris.	Brussels.	Amsterdam.
$\frac{48.25}{48.50} = .994845$	$\frac{48.15}{48.40} = .994834$	$\frac{8.72}{9.10} = .958$

The Paris rate is therefore slightly nearer the limit than the Brussels rate, so bills on Paris should be purchased.

Example 29.—(a) On 31st January, 1920, exchange quotations being

Copenhagen	..	..	..	22·03-22·07
Berlin	..	..	..	290-297.

at what rates would you have issued drafts so as to allow your bank a gross profit of $\frac{1}{4}$ % on both places. Rates to be quoted to the nearest manageable fraction, e.g., Copenhagen—nearest $\frac{1}{4}$ öre; Berlin—nearest 10 pfennige. (*Inst. of Bankers, II, 1920.*)

Solution :—

The first rate—i.e., the selling price—must be used in both cases

<i>Copenhagen</i>	..	..	..	..	22·03
<i>Less $\frac{1}{2}$ %</i>	..	..	..	..	·0275
					<u>22·0025</u>

Rate to be charged = 22·00¼ kr. per £1

<i>Berlin</i>	..	..	..	..	..	290
<i>Less 1/2 %</i>		..	..	..	..	.3625
						<u>289.6375</u>

Rate to be charged = 289.6 marks per £1

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- (b) For what amount would you have issued a draft on Berlin against payment of £769 8s. 2d.—rate as above?

Solution :—

(1) Payment	..	..	..	..	..	£769·408
Rate	..	..	..	..	..	6·982
						153881·6
						61552·6
						6924·6
						461·6
						222820·4

Amount of draft = 222,820·40 marks

Example 30.—On a day when you are able to deal in Belgas in the Market at Belgas 20·35—·40, you receive from a Belgian correspondent a draft on a British trading firm for Belgas 3,280, bearing the clause “Payable without loss in exchange”, which you are asked to collect. Allowing yourself a margin of 5 c. in the rate to cover your expenses and commission, calculate the sterling amount which you should demand from the drawee.

Solution :—

Banker's selling rate for T.T. is 20·35 less 5 c. = 20·30.

He will therefore demand payment of :—

$$\frac{3,280}{20\cdot30} = \underline{\underline{£161\ 11s.\ 7d.}}$$

Example 31.—A London banker has an order from Madrid to draw cheques upon one of the following centres at the rates indicated, or at best, viz. : Berlin 840, Paris 50·66, Amsterdam 11·68½, Lisbon 4½d. When he receives these instructions he finds the rates quoted are: Berlin 850½, Paris 51·16½, Amsterdam 11·70½—¾, Lisbon 4½—¼d. Upon which place should he draw in order to comply with his customer's instructions?

Solution :—

All the rates have got worse for selling cheques ; i.e., those in foreign currency have risen, whilst that in sterling has fallen. To determine the best rate for the operation, express all rates as proper fractions, and determine which is nearest to unity :—

$$\begin{array}{lcl} \text{Berlin} & \frac{840}{850\frac{1}{2}} & = \cdot 988 \\ \text{Paris} & \frac{50\cdot66}{51\cdot16\frac{1}{2}} & = \cdot 990 \\ \text{Amsterdam} & \frac{11\cdot68\frac{1}{2}}{11\cdot70\frac{1}{2}} & = \cdot 998 \\ \text{Lisbon} & \frac{4\frac{1}{2}}{4\frac{1}{4}} & = \cdot 917 \end{array}$$

The rate on Amsterdam has therefore deteriorated least, and the cheques should be drawn on that city.

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Example 32.—On 9th February, 1923, exchange on Amsterdam was 11·84½ for £1, London on Paris 74·80 francs for £1. What was the florin value of 100 francs? (*Inst. of Bankers, II, 1923.*)

Solution :—

$$\begin{aligned}
 ? \text{ florins} &= 100 \text{ francs.} \\
 74 \cdot 80 \text{ francs} &= \text{£1.} \\
 \text{£1} &= 11 \cdot 84\frac{1}{2} \text{ florins} \\
 &= \frac{100 \times 11 \cdot 845}{74 \cdot 80} \\
 &= \underline{15 \cdot 83\frac{1}{2} \text{ florins.}}
 \end{aligned}$$

Example 33.—Gold in London is quoted in shillings and pence per ounce fine. In 1923, the price was called the "American Parity" price, i.e., it was based on the rate of exchange for £1 gold in New York. Calculate the price of gold in London with exchange \$4·68½ (\$1 = 23·22 grains gold; 1 oz. = 480 grains gold). (*Inst. of Bankers, II, 1923.*)

Solution :—

$$\begin{aligned}
 ? \text{ £} &= 480 \text{ grains fine gold.} \\
 23 \cdot 22 \text{ grains} &= \$1. \\
 \$4 \cdot 685 &= \text{£1.} \\
 &= \frac{480}{23 \cdot 22 \times 4 \cdot 685} \\
 \therefore \text{ Price per oz.} &= \text{£4} \cdot 412 \\
 &= \underline{88\text{s. } 3\text{d. per oz.}}
 \end{aligned}$$

Example 34.—The American dollar originally had a gold content of 25·8 grains, $\frac{9}{10}$ ths fine, but by decree it has been reduced to 59·06 per cent. of its original value. If the rate of exchange between London and New York is \$4·95 = £1, calculate the price of gold in London based on the American parity (1 oz. troy = 480 grains).

If the price of gold in London is actually 142s. per fine ounce, at what premium or discount does it stand in relation to the American parity?

Solution :—

$$\begin{aligned}
 ? \text{ £} &= 1 \text{ fine ounce.} \\
 \text{If } 1 \text{ oz.} &= 480 \text{ grs.} \\
 9 \text{ grs. fine} &= 10 \text{ grs. standard.} \\
 258 \text{ grs. standard} &= \$10 \text{ (old).} \\
 \$59 \cdot 06 \text{ (old)} &= \$100 \text{ (new).} \\
 \$4 \cdot 95 &= \text{£1.} \\
 480 \times 10 \times 100 & \\
 9 \times 258 \times 59 \cdot 06 \times 4 \cdot 95 & \\
 = \underline{\text{£7} \cdot 071, \text{ or } 141\text{s. } 5\text{d. per fine ounce.}}
 \end{aligned}$$

Actual price of gold is 142s., i.e.,

Price is at a premium of 7d. over the American parity.

Example 35.—From the following data calculate what rate should be given in New York for a 60 days' commercial bill on London for £120 15s. Demand rate \$4·68½, London Bank rate 3 %, Stamp duty $\frac{1}{10}$ per cent. (*Inst. of Bankers, II, 1923.*)

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Solution :—

$$\begin{array}{rcl}
 & \text{Demand rate} & = \$4.685 \\
 \text{Less 63 days' int. at 3 \%} & = & .02426 \\
 \text{(London terms)} & & \\
 \text{Stamp duty } \frac{1}{10} \% & = & .00234 \\
 & & \underline{\hspace{1cm}} .0266 \\
 \text{Rate for 60 days' bill} & = & \underline{\underline{\$4.6584}} \\
 \text{Say, } & \underline{\underline{\$4.65\frac{1}{2}}}. &
 \end{array}$$

NOTE.—Three days' grace must be allowed. The amount of the bill need not enter into the calculation of the rate.

Example 36.—The New York rate on Paris is quoted in dollars and cents per 100 francs. If exchange London on Paris be 92.80 and London on New York 4.25½, what will be the arbitrated rate between New York and Paris in cents per franc? (*Inst. of Bankers, II, 1924.*)

Solution :—

If London on Paris is Fcs. 92.80 to £1, and London on New York is \$4.25½ to £1, then New York on Paris in cents to 1 franc will be :—

$$\begin{array}{rcl}
 ? \text{ c.} & = & \text{Fr. 1.} \\
 \text{Fcs. 92.80} & = & \text{£1.} \\
 \text{£1} & = & \$4.25\frac{1}{2}. \\
 \$1 & = & 100 \text{ c.} \\
 & = & \frac{4.2525 \times 100}{92.80} \\
 & = & \underline{\underline{4.58 \text{ cents per franc.}}}
 \end{array}$$

Example 37.—A banker in London purchases an exporter's bill for \$10,000 drawn on Buenos Aires at 42½d. He sends the bill to Buenos Aires with instructions to his correspondent to present for payment and remit the proceeds by T.T. to London less charges. Show (1) the sterling amount paid in London for the bill, and (2) the amount of the proceeds ultimately received in London from Buenos Aires in sterling. The T.T. rate at which the correspondent remits is 42½d. Argentine stamp duty ½ ¢/100; correspondent's commission ½ %. (*Inst. of Bankers, II, 1924.*)

Solution :—

The bill will be drawn payable in *paper pesos*, so the exchange rate will be $\frac{44}{100} \times 42.125$.

∴ Sterling amount paid in London

$$\begin{array}{rcl}
 & = & \frac{44}{100} \times 42.125 \times \frac{10,000}{240} \\
 & = & \underline{\underline{£772 \text{ 5s. 10d.}}}
 \end{array}$$

Net proceeds received in Buenos Aires

$$\begin{array}{rcl}
 \text{Less stamp duty } \frac{1}{2} \text{ ¢/100} & = & \$5 \\
 \text{Agent's commission } \frac{1}{2} \% & = & \$25 \\
 & & \underline{\underline{\$30}} \\
 & = & \$10,000 - \$30 = \$9,970.
 \end{array}$$

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The sterling proceeds received in London are therefore \$9,970 at $42\frac{1}{2}$ d. $\times \frac{44}{100}$ per \$.

$$\begin{aligned} &= \pounds \frac{4,225}{240} \times \frac{44}{100} \times 9,970 \\ &= \underline{\underline{\pounds 772 \text{ 5s. 2d.}}} \end{aligned}$$

Example 38.—A customer offers you a sight draft drawn on a New York bank and asks for a draft on Milan for lire 124,774·88 in exchange. The rates current are: New York T.T. $4\cdot85\frac{1}{2}$, New York cheque $4\cdot85\frac{1}{2}-\frac{1}{4}$, Italy cheque $121\frac{1}{2}-\frac{1}{4}$. Calculate how many dollars you would require. Allow a profit for yourself of $\frac{1}{2}$ cent in the New York rate and $\frac{1}{4}$ lira in the Italian rate. (*Inst. of Bankers, I, 1926.*)

Solution :—

The Milan draft is sold at the cheque rate, $121\frac{1}{2}$, less commission $\frac{1}{4}$ lira, i.e., at $121\frac{1}{2}$, yielding in sterling

$$\pounds \frac{124,774\cdot88}{121\cdot25}$$

For this amount the customer must give a dollar draft at the New York cheque rate $4\cdot85\frac{1}{2}$, plus the bank's commission of $\frac{1}{2}$ c., i.e., at $4\cdot85\frac{1}{2}$.

$$\begin{aligned} \therefore \text{Amount of draft in dollars} &= \frac{124,774\cdot88 \times 4\cdot85875}{121\cdot25} \\ &= \underline{\underline{\$5,000.}} \end{aligned}$$

NOTE.—In both transactions, the rule "Buy high, sell low" applies, so the bank's commission is deducted in *selling* lira, and is *added* in *buying* dollars.

Example 39.—A client places £754 13s. 11d. with his London bankers, with instructions to remit the equivalent by mail to Capetown. At the time exchange on that city was quoted $\frac{1}{2}$ % premium for mail transfers. Subsequently it was found that the funds were not required in South Africa and the remittance was returned telegraphically. At this time telegraphic remittances South Africa to London were quoted $\frac{1}{2}$ % premium. What would be the net amount received back by the original remitter? (*Inst. of Bankers, I, 1926.*)

Solution :—

$$\begin{aligned} &\text{If exchange on Capetown is at } \frac{1}{2} \% \text{ premium,} \\ &\quad \pounds 100\frac{1}{2} \quad \text{in London purchases } \pounds 100 \text{ in Capetown.} \\ \therefore \pounds 754\cdot69583 \text{ in London purchases } &\frac{100 \times 754\cdot69583}{100\cdot125} \end{aligned}$$

$$\begin{aligned} &\text{If South Africa quotes London at } \frac{1}{2} \% \text{ premium,} \\ &\quad \pounds 100\frac{1}{2} \quad \text{in South Africa purchases } \pounds 100 \text{ in London.} \\ \therefore \pounds \frac{100 \times 754\cdot69583}{100\cdot125} \text{ in South Africa purchases } &\frac{\pounds 100}{100\cdot5} \times \frac{100 \times 754\cdot69583}{100\cdot125} \\ &\quad \text{in London} \\ &= \pounds 750\cdot004 \\ &\text{Say, } \underline{\underline{\pounds 750.}} \end{aligned}$$

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Example 40.—An exporter in this country draws a 90 d/s bill for £1,000 on an importer in New Zealand. He enfices the bill with the clause "Payable with exchange and stamps for negotiating bills on the Colonies as per endorsement" and asks his banker in London (a New Zealand bank) to negotiate it. Allowing for New Zealand stamps at 2s. per cent., calculate: (a) the amount received by the exporter; (b) the amount to be collected from the importer. The rate quoted for the purchase of 90 d/s bills on New Zealand is 127 $\frac{1}{2}$.

Solution :—

- (a) Banker's buying rate will be endorsed on the bill, and stamps will be collected from the drawee.

Hence, the customer will receive £1,000.

- (b) The rate endorsed will be New Zealand 127 $\frac{1}{2}$ = £100 English.

∴ The bill will be converted as follows:—

	£	s.	d.
$\frac{1,000}{1} \times \frac{127 \cdot 875}{100}$	1,278	15	0
Add Stamps, 1 %		1	6 0 *
Amount to be collected from drawee ..	<u>£1,280</u>	<u>1</u>	<u>0</u>

* NOTE.—It is important to remember that on "exchange as per endorsement" bills the stamp duty in the foreign country will be calculated on the amount of the bill when converted into the foreign currency, in this case £1,278 N.Z.

Example 41.—If American currency be at a premium of $\frac{1}{4}$ % in Montreal, calculate (a) the rate, (b) the amount, a Canadian banker would pay for a 60 days' sight bill on London for £5,000. New York demand rate on London is \$4·84 $\frac{1}{2}$ — $\frac{3}{4}$, London discount rate 5 %, and profit to be made for the Montreal banker $\frac{1}{4}$ % (include stamp duty). (*Inst. of Bankers, II, 1927.*)

Solution :—

- (a) \$100 $\frac{1}{4}$ in Montreal will buy \$100 in New York.

New York demand rate on London

(buying) = 4·845

$$\therefore \text{Canadian demand rate on London} = \frac{4 \cdot 845 \times 100 \cdot 25}{100} = \$4 \cdot 8571$$

Less Interest for 63 days at 5 % = ·0419

Profit at $\frac{1}{4}$ % = ·0121

English stamp duty, say, $\frac{1}{2}$ % = ·0024

·0564

\$4·8007

Say, \$4·80 per £1.

- (b) ∴ Amount paid for bill = \$4·80 × 5,000
= \$24,000.

Example 42.—Given a spot rate of exchange, London on Paris, of 120 $\frac{1}{2}$, calculate the probable three months' forward rate of exchange. (Rate of interest in London is 5 % and in Paris 7 $\frac{1}{2}$ %.) (*Inst. of Bankers, II, 1927.*)

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Solution :—

London interest rate, 5 % per annum.

Paris interest rate, $7\frac{1}{2}$ % per annum.

∴ Money earns $2\frac{1}{2}$ % per annum more in Paris than in London.

∴ The three months' forward rate should be at a discount of approx. $\frac{1}{4}$ %.

$$\begin{aligned}\therefore \text{Three months' forward rate} &= \frac{120.5 \times 100.625}{100} \\ &= 121.253125 \\ &= 121.25 \text{ fcs. per } \text{£}1, \text{ or} \\ &= \underline{\underline{75 \text{ cents over spot.}}}\end{aligned}$$

Example 43.—On 1st February, 1927, an American banker sends the following telegram to his London correspondent:—

“ Against dollars I am a buyer of lire 500,000; limit 4.28.”

When the wire was received, the London quotation for lire was $114\frac{1}{4}$, while dollars were quoted $\$4.84\frac{1}{4}-85$.

On the assumption that the London banker executes the order, what would be the profit or loss on the transaction? (*Inst. of Bankers, II, 1927.*)

Solution :—

If the London banker executes the order at the limit specified, i.e., \$4.28 per 100 lire, he receives for 500,000 lire

$$\$ \frac{500,000 \times 4.28}{100} = \$21,400$$

These dollars he sells in London for $\text{£} \frac{21,400}{4.85}$ = $\text{£} \begin{array}{r} 4,412 \\ 7 \\ 5 \end{array}$

He covers his sale of lire by purchase of 500,000 lire

at 114, costing $\text{£} \frac{500,000}{114}$ = $\text{£} \begin{array}{r} 4,385 \\ 19 \\ 4 \end{array}$

∴ Profit (excluding brokerage and cables) = $\underline{\underline{\text{£} \begin{array}{r} 26 \\ 8 \\ 1 \end{array}}}$

Example 44.—You receive from a foreign correspondent a three months' sight bill drawn on a London firm. The instructions are to present it for acceptance, and, when accepted, to get the bill discounted on the London market, the proceeds to be placed to the credit of your correspondent.

The bill is for £100 13s. 4d. The discount rate in London is $5\frac{1}{2}$ %.

Show the amount with which you would ultimately credit your correspondent. (Days of grace and stamp duty to be taken into account.) (*Inst. of Bankers, II, 1927.*)

Solution :—

It may be assumed that the bill has 95 days to run when discounted.

			£	s.	d.
Amount of bill	..	..	100	13	4
∴ Discount = $\text{£} \frac{100.667 \times 95 \times 11}{365 \times 200}$			1	8	10
Stamp	..	..	2	0	
∴ Total net proceeds	..	..	99	2	6

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Example 45.—If English currency exchanges for Egyptian currency at the rate of £1 sterling for 19s. 9d. Egyptian, what rate of exchange does this represent? Express the rate as a premium or discount.

Solution :—

Egyptian currency is quoted as so many piastres per £1 sterling, 100 piastres being equivalent to £1 Egyptian.

Hence:—

$$\begin{aligned}
 ? \text{ Piastres} &= \text{£1 sterling.} \\
 \text{If £1 sterling} &= 19\text{s. } 9\text{d. E.} \\
 \text{£1 E.} &= 100 \text{ piastres.} \\
 &= \frac{100 \times .9875}{1} \\
 &= 98.75 \text{ Pi. per £1, or}
 \end{aligned}$$

A discount of $1\frac{1}{4}$ per cent.

Example 46.—A London merchant invested £10,000 in lire in 1913, and sold them in 1928. Assuming that the purchase and sale took place at rates approximating to the pairs of exchange ruling at these times, how much do you estimate would be the capital loss on the transaction? (*Inst. of Bankers, I, 1928.*)

Solution :—

Mint Par between England and Italy in 1913, 25.2215 lire per £1.

Mint Par between England and Italy in 1928, 92.46 lire per £1.

£10,000 at lire 25.2215 per £ = Lire 252,215

Lire 252,215 at lire 92.46 per £ = £2,727 8s.

Say, £2,728.

∴ Capital loss = £10,000 — £2,728.

= £7,272 (approx.).

Example 47.—A British merchant exports goods to New York to the value of \$10,000, and receives in payment a three months' acceptance for that amount. To realise sterling he can either sell the bill now at 4.94 $\frac{1}{2}$, or he can sell the currency for delivery in three months' time at a forward exchange rate of 4.86 $\frac{1}{2}$. Which method would you adopt? Show your arithmetical working, allowing for sterling being worth 5 % per annum. (*Inst. of Bankers, I, 1928.*)

Solution :—

$$\text{Net proceeds if bill is sold immediately} \quad \dots = \frac{\text{£}10,000}{4.94125} = \text{£}2,023.779$$

$$\text{Interest on this sum at 5 \%} \quad \dots \quad \dots \quad \dots \quad \dots = \underline{25.297}$$

$$\therefore \text{Total proceeds} \quad \dots \quad \dots \quad \dots \quad \dots = \underline{\underline{\text{£}2,049.076}}$$

$$\text{\$10,000 sold forward at \$4.86}\frac{1}{2} \text{ realise } \frac{\text{£}10,000}{4.8675} = \underline{\underline{\text{£}2,054.443}}$$

It is therefore better for the merchant to sell the dollars forward, as he thereby realises £5 7s. 4d. more than if he had discounted the bill immediately.

Example 48.—You are asked to buy a demand bill for \$487,535.02 drawn on Montreal. The rate of exchange for sight drafts is \$4.88 $\frac{1}{2}$, and your charge is, say, $\frac{1}{8}$ % commission. What will be the sterling amount with which you credit your customer's account? (*Inst. of Bankers, II, 1928.*)

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Solution :—

\$487,535.02 at \$4.88½ realise £	$\frac{487,535.02}{4.8825}$	= £99,853.563
Less Commission at $\frac{1}{16}\%$		= 62.408
		<u>£99,791.155</u>

∴ Sterling amount credited to customer's account is

£99,791 3s. 1d.

Example 49.—An exporter in Milan has the choice of two methods for obtaining payment from the London importer. He can open a London reimbursement credit through his own bank, available for bills at 3 months' date, for which the charge is $\frac{3}{8}$ per cent. The discount rate in London for fine bank bills is 2 per cent., whilst the exporter's bank will allow for a collection commission of $\frac{1}{8}$ per cent. in the rate at which it will negotiate bills under the credit.

Alternatively, the exporter can take payment in the form of a sterling T.T. to be remitted by the importer in 3 months. His bank quotes a forward rate of 10 c. discount for the sterling, as compared with the spot rate of lire 63.45.

Which method is the better for the Italian exporter, if his funds are worth 4 per cent. p.a. to him in Italy? (Ignore Italian stamp duty.)

Solution :—

(1) Spot rate at which bank will buy T.T.	.. ..	Lire 63.45
Deduct Discount at 2 % for 3 months	.. ..	·3172
Commission, $\frac{1}{8}\%$	.. ..	·0793
Stamp duty, $\frac{1}{2}\%$	.. ..	·0317
		<u>·4282</u>
		<u>Lire 63.0218</u>
Long rate will probably be	.. ..	Lire 63.02
Deduct Cost of credit, $\frac{3}{8}\%$	.. ..	·24
Ultimate rate at which exporter will realise his sterling.		<u>Lire 62.78</u>
(2) Forward rate at which bank will buy T.T.	.. ..	Lire 63.35
Deduct Loss of interest in Italy at 4 % for 3 months.	.. ..	·6335
Ultimate rate at which exporter will realise his sterling.		<u>Lire 62.7165</u>

It will be seen that he realises more lire for each £1 by the first method than by the second.

Hence the first method is the better.

Example 50.—A German export house is desirous of making arrangements for a series of shipments to South America. The importer's agent offers payment in London, and, on enquiry, the exporter, who is prepared to extend and pay for three months' credit to his customer, finds the following methods open to him:

(a) He can ask the importer to arrange for a Documentary Credit in London available for the acceptance of the exporter's three months' bills on the London bank. In this case, acceptance commission in London is $\frac{3}{8}\%$ and credit charges in South America $\frac{1}{8}\%$ on the face amount of the drawings. Such an acceptance can be discounted at the market rate for fine bank paper of $2\frac{1}{2}\%$.

(b) He can draw a bill on his customer direct, the customer domiciling it in London. In this case the paying agent charges $\frac{1}{8}\%$ commission, and the market for domiciles is very poor, the cheapest buyer being at $4\frac{1}{2}\%$ per annum.

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(c) He can draw a bill on his customer direct, payable in sterling, and these bills can be negotiated in Berlin at an inclusive rate of Rms. 14·20 per £1, the current cheque rate being 14·37½.

Which arrangement is the cheapest?

Solution :—

(a) The cost per annum of a *three months' credit* will be

$$\left(\frac{1}{4} + \frac{1}{4}\right) \times 4 \dots \dots \dots = 2 \% \text{ per annum.}$$

$$\text{Plus cost per annum of discounting bank bills} \dots \dots \dots = 2\frac{1}{2} \% \text{ ,, ,,}$$

$$\text{Total} \dots \dots \dots = 4\frac{1}{2} \% \text{ per annum.}$$

(b) The *three months' domicile* commission will be ½ %, or ½ % per annum.

$$\text{The discount charges are} \dots \dots \dots = 4\frac{1}{2} \% \text{ ,, ,,}$$

$$\text{Total} \dots \dots \dots = 5 \% \text{ per annum.}$$

(c) He can deal in the bill by selling it in Berlin for Rm. 14·20 per £1. This is 17½ pfennige worse on a three months' bill, or, yearly, a charge of 70 pfennige on the short rate of 14·37½.

$$\text{Hence on } 14\cdot37\frac{1}{2} \text{ reichsmarks charge is} \dots \text{ Rmks. } 0\cdot7$$

$$\therefore \text{ On 100 reichsmarks charge is} \dots \dots \dots \frac{0\cdot7 \times 100}{14\cdot37\frac{1}{2}}$$

$$\text{say, } 4\frac{7}{8} \% \text{ per annum.}$$

The exporter's cheapest method is therefore to ask the importer to arrange a documentary acceptance credit with a London banker.

Example 51.—Owing to exchange restrictions abroad, exporters often have difficulty in repatriating funds to this country. An exporter in London draws a bill on Hungary at sight for £329 15s. 11d. The bill is duly presented, but, owing to local laws, paid in pengöcs at the rate of 29 per £1. These pengöcs are placed on a "blocked" account and the exporter requests his bank to sell at best, when possible. Later, a buyer of pengöcs appears wishing to import goods from Hungary, and for this purpose the pengöcs will be released. The rate he is willing to pay for the "Inland Pengöcs", as these are called, is 31½. Ascertain the exporter's exchange loss.

Solution :—

$$\text{Proceeds of the bill in pengöcs} = 329\cdot796 \times 29$$

$$= \text{Pengöcs } 9,564\cdot08$$

$$\text{Proceeds of sale of Pengöcs } 9,564\cdot08 @ 31\cdot25$$

$$= \text{£}306 \text{ ls. } 0\text{d.}$$

$$\therefore \text{ Loss to exporter} = \text{£}329 \text{ 15s. } 11\text{d.}, \text{ minus } \text{£}306 \text{ ls. } 0\text{d.}$$

$$= \underline{\underline{\text{£}23 \text{ 14s. } 11\text{d.}}}$$

Example 52.—You have bought from a customer "about" Pes. 60,000 for delivery end October at 39½. On the 2nd November you are advised by your Madrid correspondent that Pes. 60,395·50 have been credited to your "blocked" peseta account, and that an official permit for their release has been applied for. At that date there is a discount on forward pesetas of ¼ per month. If the amount on the blocked account is released on 30th November, with what amount will the customer be credited?

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Solution :—

On 30th November the banker is short of about 60,000 Pes. as a result of the non-delivery of free currency.

He therefore buys in the pesetas at the ruling spot rate and sells them one month forward at a difference of $\frac{1}{4}$, hoping that the blocked account will be freed by the end of the month. His anticipation turns out to be correct, but he has lost $\frac{1}{4}$ in the rate on the swap and will therefore charge this up to the customer by adjusting his rate to $40\frac{1}{4}$ (i.e., $39\frac{3}{4}$ plus $\frac{1}{4}$). The customer would therefore be credited with

$$\text{£} \frac{60,395 \cdot 40}{40\frac{1}{4}} = \underline{\underline{\text{£}1,505 \text{ 3s. 7d.}}}$$

Example 53.—A bank requires to buy 200,000 ounces standard silver for use in two months' time. The spot price is $18\frac{1}{2}$ d. per ounce, and the forward price is $18\frac{1}{4}$ d. per ounce. The bank can invest its money at 3% for the two months and accept the forward rate, or it can buy the silver at once at the spot price. In the latter case, half the silver, owing to lack of storage space, will have to be stored elsewhere at a charge of 3d. per 1,000 ounces per month and an insurance premium of £1 5s. Which course should the bank adopt?

Solution :—

(a) COST BY BUYING SPOT:				£	s.	d.
200,000 ounces $\times$ $18\frac{1}{2}$ d.	..	..	..	15,182	5	10
Storage on 100,000 ounces	..	..	..	1	5	0
Insurance	..	..	..	1	5	0
Interest lost, 2 months at 3%	..	..	..	75	18	3
				<u>£15,260</u>	<u>14</u>	<u>1</u>

(b) BUYING FORWARD:

$$200,000 @ 18\frac{1}{4} = \text{£}15,286 \text{ 9s. 2d.}$$

It will therefore be cheaper to buy spot silver and store it.

Example 54.—A merchant banker agrees to buy from a customer 1,000 sovereigns at 25s. 6d. each. He can sell gold at 110s. per ounce fine. A sovereign contains 113·0016 grains of pure gold and 480 grains equal one ounce. Find his profit, ignoring the cost of melting down.

Solution :—

$$1 \text{ sovereign} = \frac{113 \cdot 0016}{480} \text{ ounces}$$

Therefore the amount of pure gold in 1 sovereign can be sold for

$$\begin{aligned} & \frac{113 \cdot 0016 \times 110}{480} \text{ shillings} \\ & = 25 \cdot 8962 \text{ shillings.} \end{aligned}$$

Therefore 1,000 sovereigns can be sold for 25,896·2 shillings.

But the banker pays for them

$$\begin{aligned} 1,000 \times 25\text{s. 6d.} &= 25,500 \text{ shillings} \\ \therefore \text{Banker's profit} &= \underline{\underline{396 \cdot 2 \text{ shillings}}} \\ &= \underline{\underline{\text{£}19 \text{ 16s. 2d.}}} \end{aligned}$$

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Example 55.—A banker buys Turkish lira in Baghdad, at the rate of $8\frac{1}{2}$ paper lira for each gold lira. The current price for sterling is 680 (piastres per £1). The following is the bullion statement from the refiners for 3,000 coins. Complete the calculations, and from this, assuming the banker sells the sterling at the current rate quoted, find his profit, in Turkish paper, ignoring freight or other charges not given in this question.

Weight after Melting (Including Pot Scrapings). Ounces.					Assay Report.	
					Fine Gold.	Fine Silver.
					Ounces.	Ounces.
689·55					631·628	11·03
Gold, 631·628 ounces, sold at 124s. 3d. per ounce					..	.. £
Silver, 11·03 ounces, sold at 19½d. per ounce					..	.. £
Cost of assay					..	4 0
Melting and refining					£5 14 11	
Net proceeds of gold coins						£5 18 11
						£
Solution :—						£ s. d.
The gold will realise					..	3,923 19 9
The silver will realise					..	18 0
Less charges					..	£3,924 17 9
Net proceeds of gold coin					..	5 18 11
£3,918 18s. 10d. at 680					..	£3,918 18 10
= Piastres 2,664,880·56 or £T.26,648·81 (paper)						
Cost of £T.3,000 gold at $8\frac{1}{2}$ = £T.25,125 (paper).						
Profit: £T. (paper) 1,523·81.						

Example 56.—Egypt is sometimes quoted at a single rate and sometimes at par (which is £E.97½ = £100 sterling), *plus* or *minus* a percentage.

A client tenders you for negotiation a cheque on Cairo for £E.1,000. Having no nostro account in Egypt, you ring up two banks operating in that country and are offered 97½ by one and par (97½) *plus* ¼ % by the other. Which rate would you accept?

Solution :—

$$\begin{aligned}
 \text{Par} + \frac{1}{4} \% &= 97\frac{1}{2} + \frac{97\frac{1}{2} \times \frac{1}{4}}{100} \\
 &= 97\frac{1}{2} + \cdot 24375 \\
 &= 97\cdot 74375.
 \end{aligned}$$

The second rate should therefore be accepted.

Example 57.—You have \$12,000 in notes in your foreign money till and decide that, as you do not need a running balance of more than \$2,000, you will dispose of \$10,000 of them. A foreign note dealer offers to buy them at 3·40; or, alternatively, you can ship the notes to New York and sell cheque against them. On the market spot dollars are quoted $3\cdot 39\frac{1}{2}-\frac{1}{2}$, the cheque margin is ¼ths of a cent, the insurance on notes from London to New York is 9d. % and the postage on the parcel 5s. Which will be the most remunerative course?

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Solution :—

(a) If the notes are sold to the dealer, the proceeds are:—

$$\text{£} \frac{10,000}{3.40} = \text{£}2,941 \text{ 3s. 6d.}$$

(b) If the notes are remitted to New York, you will sell cheque against them at $3.39\frac{1}{2}$ (the market will pay you only at the higher rate) plus $\frac{1}{8}$ c. = $3.39\frac{1}{2}$ ths.

				£	s.	d.
Proceeds of \$10,000 @ $3.39\frac{1}{2}$	..	..	..	= 2,943	17	8
Less Insurance @ 9d. %	..	= 1	2	1		
Postage	..	=	5	0		
					1	7
					10	7

The best course is therefore to sell cheque against remittance of the notes to New York.

Example 58.—The exchanges between a country whose currency has depreciated and those of the various gold standard countries tend to show approximately an equal discount on the mint parity, any disparity being rapidly removed by arbitrage operations.

Ascertain the approximate rate of exchange between London and Switzerland, given that the rate of exchange on Paris is $83.83\frac{1}{2}$ to £1. What is the percentage discount on sterling in terms of gold standard currencies?

Solution :—

Sterling is worth only $\frac{83.8375}{124.2134}$ of its par value,

$$\begin{aligned} \text{i.e., } \frac{83.8375}{124.2134} \times 100 \% \text{ of its par value} \\ = 67.49\frac{1}{2} \% \text{ (approx.).} \end{aligned}$$

$$\therefore \text{Discount on sterling in terms of gold currencies} = 32.50\frac{1}{2} \%.$$

$$\begin{aligned} \therefore \text{The rate on Switzerland will be approximately } \frac{67.495}{100} \times \frac{25.2215}{1} \\ = \text{Fcs. } 17.02\frac{1}{2}. \end{aligned}$$

Example 59.—A London banker finds that certain exchange operations will result in his account in New York being overdrawn for eight days. He would be charged overdraft interest at the rate of $4\frac{1}{2}$ % per annum or he can buy T.T. and sell cheque New York at $\frac{3}{4}$ c. discount on a spot rate of $\$4.87\frac{1}{2}$. Assuming that the cheque would not be presented for 8 days, when his account will be in credit, which would be the cheaper form of temporary cover?

Solution :—

Interest charged per £1 on overdraft for 8 days in New York at New York terms

$$= \frac{4.875 \times 9 \times 8}{360 \times 2 \times 100} = .4875 \text{ c.}$$

$$\text{Discount per £1 on sale of cheque} = \frac{3}{4} \text{ c.} = .375 \text{ c.}$$

It is therefore cheaper for the London banker to buy T.T. and sell cheque than to overdraw his account in New York.

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Example 60.—A bank receives from a French correspondent the following telegram:—

“ Value Friday sell 550,000 francs against three months sixty centimes our favour.”

Explain the operation.

Solution :—

The request contained in the telegram given is that the London bank should carry out a spot against forward operation for the French bank. The London bank will have to sell 550,000 francs on the London, or any other market, “ value”, i.e., for payment here and there, on the following Friday, and against this sale will have to purchase 550,000 francs for future delivery in three months’ time at a price which will be more favourable for its French customer by 60 centimes per £. That is to say, if the sale of spot francs is effected at the rate of 123·85 francs per £, the purchase of the forward francs must be made at a minimum price of 124·45 francs per £. In respect of the spot sale the French bank will credit its London agent with the francs on the same day that it receives credit for the sterling equivalent, i.e., on the following Friday, while in respect of the forward purchase, the London bank will debit the sterling account of the French bank in three months’ time on the same day that it gives instructions for the francs to be paid over to the French bank. The London bank will, of course, endeavour to obtain *more* than 60 centimes per £ in its favour for the three months’ spread as, if it can obtain, say, 65 centimes, the extra five centimes will constitute its profit.

Example 61.—Ascertain the Central Bank’s position in reichsmarks, given the following details:—

Balance at Deutsche Bank	Rmks. 100,000 (in credit)
Balance at Dresdner Bank	14,000 (overdrawn)
Total Forward purchases outstanding ..	4,491,000
Total Forward sales outstanding	5,026,000
Bills on Berlin held, not yet due	460,000

Foreign Branch summary of small deals not yet recorded by the dealers (being too small in themselves to be separately recorded):—

Drafts, etc., sold	Rmks. 7,000
Cheques, coupons, etc., bought	1,000

Solution :—

Spot balances (net)	Rmks. 86,000
Add Purchases: Forward	4,491,000
Bills held	460,000
Sundries	1,000
	5,038,000
Sales: Forward	Rmks. 5,026,000
Sundries	7,000
	5,033,000
Net operating position	Rmks. 5,000

i.e., the Central Bank has an overbought position of Rmks. 5,000.

In practice, this position would be regarded as “ square”, for the value of the reichsmarks is only about £300, and therefore not a dangerous risk.

Example 62.—An exchange dealer finds that his position in New York is as follows:—

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- (a) He has a credit balance of \$100,000 with one agent and a debit balance of \$50,000 with another.
 (b) He has purchased T.T. \$1,560,000 and sold T.T. \$1,500,000.*
 (c) He has sold drafts for \$245,000 which are still in transit.
 (d) He has bought drafts for \$110,000 which are still in transit.
 (e) He has bought long bills for \$295,000 which have not yet matured.
 (f) He has the following forward contracts outstanding:—

		Bought. \$	Sold. \$
1 month	.. ..	3,562,000	4,129,000
2 months	.. ..	5,148,000	6,324,000
3 months	.. ..	2,197,000	3,212,000
		<u>\$10,907,000</u>	<u>\$13,665,000</u>

* Note that T.T.'s are not deliverable until two days later, by market custom. Hence they do not appear immediately in the spot balances.

From these particulars work out his position and explain what action is called for.

Solution :—

		Bought. \$	Sold. \$
Spot deals	.. ..	100,000	50,000
T.T.'s	.. ..	1,560,000	1,500,000
Drafts outstanding	.. ..	110,000	245,000
Long bills	.. ..	295,000	—
Forward contracts	.. ..	10,907,000	13,665,000
		<u>\$12,972,000</u>	<u>\$15,460,000</u>

The dealer is thus *oversold* to the extent of \$2,488,000, and should, therefore, buy in, say, \$2,500,000 spot to square his position. It will be noticed, however, that it is his forward position that is heavily oversold, and, assuming that he does not desire to have his funds tied up in dollar balances, he might still further improve his position by swapping the \$2,500,000 spot he has bought for, say, \$500,000 one month, \$1,000,000 two months', and \$1,000,000 three months' orward. By so doing he squares up each of his forward positions.

In practice, of course, the dealer's actual disposition of spot and forward balances would depend upon many considerations, e.g., usability of the money in the different centres and rates of interest.

Example 63.—Using the figures given in the preceding example, show the dealer's final position after carrying out the suggested operations to square his position.

Solution :—

		Debits. \$	Credits. \$
Balances (unchanged)	.. ..	50,000	100,000
T.T.'s sold (further \$2,500,000 swapped)	.. ..	4,000,000	—
T.T.'s purchased (further \$2,500,000 bought to cover)	.. ..	—	4,060,000
Drafts and bills (unchanged)	.. ..	245,000	405,000
Forward contracts:—			
1 month (further \$500,000 bought against spot)	.. ..	4,129,000	4,062,000
2 months (further \$1,000,000 bought against spot)	.. ..	6,324,000	6,148,000
3 months (further \$1,000,000 bought against spot)	.. ..	3,212,000	3,197,000
		<u>\$17,960,000</u>	<u>\$17,972,000</u>

He is now *overbought* to the extent of \$12,000, which he might cover by a spot sale.

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Example 64.—Your bank has the offer of a G.M.T. for ten days ahead for \$500,000, just at a time when you have actually \$350,000 on current account in New York, earning 2 % per annum. The terms of the offer are that the customer will sell G.M.T. at 4·51½ *provided you will sell him the same amount of dollars by T.T. at 4·51.* You decide to do this, but in covering the operation you utilise your available balance abroad, buy \$150,000 at 4·51 for T.T. and thus make up the amount required to sell to him.

You have now to get rid of the unwanted \$150,000 G.M.T. which you have purchased (for your dollar balance abroad has been accumulated for a pre-arranged purpose, and you are naturally ready to take this back in 10 days' time).

Your sales of G.M.T. are done as follows:—

\$100,000 at 4·51½ and the balance, viz., \$50,000, at 4·51½. Allowing brokerages of £2 5s. 0d. in all, what profit does your acceptance of this offer yield? (New York works on 360 days to the year.)

Solution :—

Purchases.	Sales.
(a) \$500,000 G.M.T. @ 4·51½.	(c) \$500,000 T.T. @ 4·51.
(b) \$150,000 T.T. @ 4·51.	(d) \$100,000 G.M.T. @ 4·51½.
	(e) \$50,000 G.M.T. @ 4·51½.

Setting off (b) against part (c) we have:—

	£	s.	d.
(b) and (c) Proceeds of T.T. (500,000–150,000) @ 4·51 ..	77,605	6	5
(d) Proceeds of G.M.T. 100,000 @ 4·51½	22,148	7	11
(e) Proceeds of G.M.T. 50,000 @ 4·51½	11,068	1	4
Total proceeds	£110,821	15	8
Less Cost of \$500,000 G.M.T. @ 4·51½	110,711	6	5
	£110	9	3
Less brokerages	2	5	0
Gross Profit	£108	4	3
Less interest lost on \$350,000 sold at 4·51 (£77,605), 10 days @ 2 %	43	2	3
Net Profit	£65	2	0

Example 65.—(a) Find the silver exchange constant applicable to the Chinese tael of, say, 579·85 grains, 9ths fine, in terms of British standard silver ·925 fine, per ounce of 480 grains. (Answer to 5 places of decimals and ignore expenses.)

(b) Apply this constant to a price of 17½d. per ounce standard and thus ascertain the rate of exchange of the tael produced by shipping silver from London to Shanghai. Allow for interest lost in shipment (40 days at 3 %), and other charges totalling 1½ %. (Nearest ¼d.)

(c) Assuming a shipment of 90,000 standard ounces bought at the above price, the actual charges amounting to £80 10s. 0d. with interest for 35 days only being lost, work out the rate of exchange thus produced.

Solution :—

(a) ? Pence = 1 Shanghai tael

If 1 tael = 579·85 grains standard

10 grains standard = 9 grains fine

925 grains fine = 1,000 grains British standard

480 grains = 1 ounce

1 ounce = x pence (price of silver in London)?

$$\therefore 1 \text{ tael} = \frac{579 \cdot 85 \times 9 \times 1,000 \times x}{10 \times 925 \times 480} \text{ pence}$$

= 1·17537 x pence (where x is the price of silver in London)

Silver Constant (ignoring charges) = 1·17537.

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(b) Constant = 1.17537

Price of Silver = 17.375d. per ounce

∴ Value of tael (ignoring charges) = $1.17537 \times 17.375 \dots = 20.4221$

Add Interest, 40 days @ 3 % = .0671

Charges, $1\frac{1}{4}$ % = .2553

20.7445

Rate of exchange = $20\frac{3}{4}$ d. (to nearest $\frac{1}{4}$ d.).

	£	s.	d.
(c) Cost of 90,000 standard ounces @ 17.375d.	=	6,515	12 6
Add Charges	=	80	10 0
Interest, 35 days @ 3 %	=	18	14 11
Total Cost	=	<u>£6,614</u>	<u>17 5</u>

90,000 ounces st. (British) = $90,000 \times \frac{925}{1,000} \times \frac{1,000}{900}$ ounces st. China.

Tael equivalent = $\frac{90,000 \times 925}{900} \times \frac{480}{579.85}$

= 76,571.52 taels.

∴ Taels 76,571.52 cost £6,614 17s. 5d.

∴ Rate of exchange = $\frac{6614.871 \times 240}{76,571.52} = 20.733d.$

(say) $20\frac{3}{4}$ d. (to nearest $\frac{1}{4}$ d.).

Example 66.—If American currency is at a discount of $6\frac{1}{2}$ – $6\frac{1}{4}$ per cent. in Montreal, how much will a Canadian banker pay for a T.T. for American \$1,000, if he takes a profit of 10 cents in the rate?

Solution :—

The Canadian banker can cover by selling at $6\frac{1}{2}$ per cent. discount, i.e.,

Can. \$93.50 per U.S. \$100.

He will therefore quote Can. \$93.40 per U.S. \$100, and will pay

$$\begin{aligned} & \$ \frac{1,000}{100} \times \frac{93.40}{1} \\ & = \text{Can. } \underline{\underline{\$934.}} \end{aligned}$$

Example 67.—An exchange operator purchases 4 % Funding Loan in London to the face value of £50,000 at $90\frac{1}{2}$ and sells the stock in New York at 91. He employs the proceeds in the purchase of a T.T. on London at the current rate of exchange of $4.85\frac{1}{2}$. The Wall Street quotation is based on a nominal parity of \$5 to the £.

Calculate the operator's profit or loss on the deal. You may ignore brokerages and other charges.

Solution :—

Cost of £50,000 Funding Loan @ $90\frac{1}{2}$ = $\frac{50,000 \times 90.75}{100} \therefore \underline{\underline{£45,375}}$

Dollar proceeds of £50,000 Funding Loan at 91

= $\frac{\$50,000 \times 5 \times 91}{100} = \underline{\underline{\$227,500}}$

Proceeds of \$227,500 @ $4.85\frac{1}{2}$ = £46,831.779

∴ Operator's Profit = £1,456.779
= £1,456 15s. 7d.

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Example 68.—The following quotations for exchange on South Africa appeared in the daily Press:—

	Buying Rate.	Selling Rate.
S.A. Union Territory, T.T.s	£67 12 6	£66 12 6
S.A. Union Territory, sight drafts ..	68 2 6	66 13 9

If the South African banks in London charge 9 % per annum for discounting commercial drafts on South Africa, use the above rates to calculate (a) the probable rate which would be quoted by the London office of a South African bank for the purchase by it from a Manchester merchant of a 60 d/s commercial bill on Cape Town for £173 12s. 6d., and (b) the sterling amount which the merchant would receive if he sold the bill, to the bank, at such a rate. (Allow 1s. S.Af. % for stamp, and take 360 days to the year.) (*Institute of Bankers, 1933.*)

Solution :—

					£25
(a) Buying rate for sight drafts	..	..	..	..	68·1
Add Interest @ 9 % for 60 days,	$\frac{60}{360} \times \frac{9}{100} \times \frac{68 \cdot 125}{1}$	..	..	..	1·022
Stamp duty, $\frac{1}{2}$ %/oo	..	..	..	..	·034
					<u>£69·181</u>

Buying rate for 60 d/s draft is £69 3s. 9d. (to nearest 6d.).

(b) On the basis of this rate a bill for £173 12s. 6d. would be purchased for:—

$$\frac{173 \cdot 625}{69 \cdot 1875} \times 100 = \underline{\underline{£250 19s. 0d.}}$$

Example 69.—If the mailing period between London and South Africa is taken as 28 days, calculate the rate of interest represented by the spread between the rates quoted in London for the purchase of T.T. and cheque on South Africa, the two rates being £100 15s. and £101 5s. respectively.

Solution :—

The spread is 10s. on a rate of £100 15s., i.e.,

$$\begin{aligned} \frac{10}{2,015} \times \frac{100}{1} \times \frac{365}{28} \text{ per cent. p.a.} \\ = 6 \cdot 47 \% \text{ approx.} \\ \text{Say, } \underline{\underline{6 \frac{1}{2} \% \text{ per annum.}}} \end{aligned}$$

Example 70.—An exchange dealer in London, having bought from a customer \$15,000 T.T. New York at \$3·60½ per £, seeks the best method of covering the operation. If the following are the current market rates how should he cover his purchase of dollars and what is his profit? (Ignore expenses.)

T.T. London on New York	3·60-½
.. .. „ Berlin	14·50-·55
.. .. „ Amsterdam	8·71-·72
.. .. „ Zurich	18·37-·38
.. Berlin on New York	4·04 marks per \$
.. Amsterdam on New York	2·42 Fls. per \$
.. Zurich on New York	5·10 Fcs. per \$

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Solution :—

The dealer must sell \$15,000 at as low a rate as possible.

1. If he sells dollars in London the rate is \$3·60½.
2. If he sells dollars in Berlin at 4·04 Rm. per \$ and sells the proceeds at 14·55 Rm. per £, the equivalent rate is $\frac{14\cdot55}{4\cdot04}$ per £
= \$3·6015 per £.
3. If he sells dollars in Amsterdam at 2·42 Fls. per \$ and sells the proceeds at 8·72 Fls. per £, the equivalent rate is $\frac{8\cdot72}{2\cdot42}$ per £
= \$3·603 per £.
4. If he sells dollars in Zurich at 5·10 Fcs. per \$ and sells the proceeds at 18·38 Fcs. per £, the equivalent rate is $\frac{18\cdot38}{5\cdot10}$ per £
= \$3·604 per £.

The best centre for the sale of dollars is therefore Berlin.

Sale of \$15,000 @ Rm. 4·04 realises Rm. $15,000 \times 4\cdot04$
= Rm. 60,600.

	£ s. d.
Sale of Rm. 60,600 @ 14·55 realises $\frac{60\cdot600}{14\cdot55}$	= 4,164 18 11

Purchase of \$15,000 from customer at \$3·60½ costs $\frac{15,000}{3\cdot605}$	= 4,160 17 9
--	--------------

<u>The dealer's profit is</u>	<u>£4 1 2</u>
-------------------------------	---------------

Example 71.—On a given date francs were quoted at Fcs. 124·23·25 per £1. Some time later the rates were quoted at Fcs. 80½–80½. Compare the size of the spread in these two rates by expressing each as a per milage of the middle rate.

Solution :—

When francs are quoted at 124·23·25, the middle rate is 124·24, whilst the spread is Fcs. ·02,

$$\begin{aligned} \text{i.e., a spread of } & \frac{\cdot02}{124\cdot24} \times \frac{1,000}{1} \text{ per mille} \\ & = \underline{\underline{\cdot16 \text{ per mille.}}} \end{aligned}$$

When francs are quoted at 80½–½, the middle rate is 80½, whilst the spread is ½ Fc.,

$$\begin{aligned} \text{i.e., a spread of } & \frac{\cdot25}{80\cdot375} \times \frac{1,000}{1} \text{ per mille} \\ & = 3\cdot11 \text{ per mille} \\ & = \underline{\underline{3\frac{1}{2} \text{ per mille (approx.).}}} \end{aligned}$$

I.e., the spread is twenty times greater than in the first instance.

MISCELLANEOUS PROBLEMS ON EXCHANGES 773

Example 72.—From the following data calculate at what rate a banker, operating with £1,000, could sell American dollars three months' forward. Spot rate, \$4·84. Interest in London, 5 %. Interest in New York, 4 %. (*Institute of Bankers*, 1929.)

Solution :—

Assuming that the banker covers his forward sale by buying spot, he bases his forward rate on the spot rate, viz.	4·84
Less loss of interest, 3 months at 1 %	·012
	<u>4·828</u>

say, 4·82½ for dollars 3 months' forward or 1½ c. premium.

Example 73.—If, on 30th November, 1931, the T.T. rate, London on New York, was quoted at \$3·74—½ per £, and the forward margins were: 1 month, ½—½ c. premium; 2 months, 1—½ c. premium; and 3 months, 1½—1½ c. premium, and a London banker was prepared to deal with his customers at these rates, what rates would he have quoted to a customer who required the sale to him of:—

- \$20,000 for delivery 31st January, 1932;
- \$20,000 for delivery during December, 1931, at his option;
- \$20,000 for delivery during December, 1931–January, 1932, at his option;
- \$20,000 for delivery during January, 1932, at his option?

Assuming that the customer accepts the quotation for (b), with how much sterling would he be charged on completion of the contract and on what date would this take place if he took full advantage of his option?

Solution :—

- 3·74 less ·01 = 3·73.
- 3·74 less ·005 = 3·73½. (This is more favourable to the banker than 3·74 for spot.)
- 3·74 less ·01 = 3·73. (This is more favourable than 3·735 for December 31st.)
- 3·74 less ·01 = 3·73. (This is more favourable than 3·735 for December 31st.)

Cost of \$20,000 at 3·73½ = £5,354 15s. 1d.

The customer would take delivery on 31st December, as he has been charged the premium of ½ cent on the assumption that he will take full advantage of his privilege to delay completion for a full month.

Example 74.—A customer hands you for collection on the 1st May a bill for £1,000 on Rio de Janeiro clausured " Payable at collecting banker's selling rate for 90 d/s draft on London ". You agree to advance him £500 against the bill, and the advance is made on the same day (1st May) at 5½ per cent. On 12th August the return remittance is received from Rio de Janeiro, together with a debit note for Milreis 50 in respect of stamps and other expenses. The return remittance is accepted on 13th August and is discounted the following day at 3 per cent. Calculate the amount to be credited to the customer. The milreis may be converted at 3½d.

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Solution :—

**Return remittance falls due on 14th November.
It is discounted on 14th August.**

						£	s.	d.
Hence, from face value						1,000	0	0
						£	s.	d.
Deduct Discount at 3 % for 92 days ..						7	11	3
Stamps, $\frac{1}{2}$ %						10	0	
							8	1 3
Net Proceeds						£991	18	<u>9</u>
						£	s.	d.
Amount of advance to customer						500	0	0
Add Interest from 1st May to 14th Aug., viz., 105 days at $5\frac{1}{2}$ % ..	£	s.	d.					
Expenses, Mil. 50 @ $3\frac{1}{2}$ d. ..				7	18	3		
				13	1			
						8	11	4
							508	11 4
Amount due to customer						£483	7	<u>5</u>

Example 75.—A New York dealer is willing to sell T.T. on London at \$4.95 and to sell cheque at \$4.94½. Allowing for a mailing period of 9 days, calculate the interest rate represented by the spread between the two rates.

Solution :—

The "spread" between cheque and T.T. amounts to \$·005 (i.e., $\frac{1}{2}$ cent) on \$4·95.

This is equivalent to $\frac{.005}{4.95} \times \frac{100}{9} \times \frac{365}{1}$ per cent. p.a.
 $= 4.0965 \%$.

Say, $4\frac{3}{4}\%$ per annum.

Example 76.—A customer hands his banker for collection a draft for £400 on Paris, which is expressed to be payable by a sight draft on London. The banker sends the draft to his Paris agent, who stamps the bill, presents it to the drawee and obtains payment.

If the Paris banker was a dealer in cheque on London at 80·45-50 at the date of presentation, and if French stamp duty is $\frac{1}{2}$ per mille, calculate the amount with which the London banker will credit his customer on receipt of the proceeds from Paris. Allow the London banker a commission of 1 per mille.

Solution :—

The French banker would demand payment at his selling rate, viz., 80.50, and would therefore receive Fcs. $400 \times 80.50 =$ Fcs. 32,200 from the drawee.

He will credit the London banker with £400 and debit him with Fcs. 16.10 for stamp duty. He charges no collecting commission, as he takes his profit in the rate at which he collects.

		£	s.	d.
London banker will credit customer with	..	400	0	0
	s. d.			
Less Commission, 1 %	8 0			
Stamp duty, Fcs. 16·10 @ say 80	4 0			
			12	0
Amount credited to customer		£399	8	0

MISCELLANEOUS PROBLEMS ON EXCHANGES 775

Example 77.—A banker in Norway buys a bill on London (due 18th November) for £1,519 13s. 6d. at Kr. 18·16 = £1. He remits it to London, discounts it on 2nd September at $1\frac{1}{4}$ per cent., and sells the proceeds by T.T. at Kr. 18·22 = £1. Calculate his profit.

Solution :—

$$\begin{aligned}\text{Cost of bill} &= \text{Kr. } 18\cdot16 \times 1,519\cdot675 \\ &= \text{Kr. } 27,597\cdot29.\end{aligned}$$

						£	s.	d.
Proceeds of bill	..	..	..	..	..	=	1,519	13 6
							£	s. d.
Less Discount, 77 days @ $1\frac{1}{4}$ %						=	4	0 2
Stamps, 1s. %	..	..				=	16	0
							4	16 2
							<u>£1,514</u>	<u>17 4</u>
£1,514 17s. 4d. at Kr. 18·22 realise	..					Kr.	27,600·87	
Deduct Outlay ..	..	..	..	..			27,597·29	
						Banker's Profit	<u>Kr. 3·58</u>	

APPENDIX

ABBREVIATIONS USED IN EXCHANGE AND BANKING

A.	Anna (Indian coinage)	B/L	Bill of Lading
@	At; for; to; from	B.N.	Bank Note
A.A.R.	Against all risks	B/N	Bill Negotiated
A/C	Account Current	B.O.	Branch office; Buyer's option
a/c or acct.	Account	Bona fide	In good faith
Acc.	Acceptance, accepted	Bot.	Bought
Acct.	Accountant	B/P	Bill Payable
Ackgt.	Acknowledgment	B.P.B.	Bank Post Bill
A.D.	Anno Domini (In the year of our Lord)	B/R	Bill Receivable
a.d. or a/d	After date	Brit.	British
Adv.	Advice	B.S.	Balance Sheet
Ad val.	Ad valorem	B/S	Bill of Sale
Agt.	Agent	C/-	Currency; coupon
Agst.	Against	c.	Cent; cents; centime; centavo; copeck
Amt.	Amount	C/A	Capital Account
Ans.	Answer	C.A.	Chartered Accountant
A/o	Account of	Cap.	Capital; Capitulum (Chapter)
A/or	And, or	Cash.	Cashier
A.P.	<i>à protester</i> (to be protested —bills)	C.B.	Cash Book
Approx.	Approximate	C. and D.	Collection and Delivery
A/S	Account Sales	C/d	Carried down
a/s	At sight, after sight	C.d.	Cum dividendo (with divi- dend)
as.	Annas	C. and F.	Cost and Freight
Av.	Average	Cent.	Centum (100); Centime; Centigrade; Centavo
Av. or Avoir.	Avoirdupois	Cert.	Certificate or Certified
A/v	Ad valorem (according to value)	C/f	Carried forward
Bal.	Balance	Cert. Inv.	Certified Invoice
B.B.	Bill Book	C.H.	Custom House; Clearing House
B.C.	Bills for Collection	Ch.	Chapter
B/D	Bank Draft; Bill Dis- counted	Ch. fwd.	Charges forward
B.Dt.	Bill Discounted	Chq.	Cheque
B/E	Bill of Exchange	C.I.F.	Cost, Insurance and Freight
B. of E.	Bank of England	Cml.	Commercial
B/f	Brought forward	C/N	Credit Note; Consignment Note; Circular Note
Bk.	Bank; Book		
Bkg.	Banking		
Bkpt.	Bankrupt		

Co.	Company; County	E.E.	Errors Excepted
C.O.	<i>Compte ouvert</i> (open account)	E/I	Endorsement Irregular
C/O	Cash Order (banking)	Eng.	England
c/o	Care of; carried over	Eq.	Equivalent
C.O.D.	Cash on Delivery	Ex.	Exchange
Com.	Commercial; Commission	Exch.	Exchange; Exchequer
Con.	Contra (against)	Ex cp.	Ex coupon
Con. cr.	Contra credit	Ex div.	Without dividend
Con. inv.	Consular invoice	Ex In.	Without Interest
Cont.	Contract; Continent	Ex n.	Ex new (without the right to new shares)
Contra	Against	Exs.	Expenses
Coy.	Company		
C/P	Charter Party; Custom of Ports	f.a.s.	Free alongside ship
		Fb	Francs belges, i.e., Belgian francs
Cr.	Credit; Creditor	f, fc.	Franc
ct.	Cent; credit; current	Fcs. (fcs.)	Francs
cts.	Cents	F.G.A.	Foreign general average
Cum d/-	(or div.) With dividend	Fig.	Figure
Curt.	Current	Fl.	Florin(s)
C.W.O.	Cash with order	Fo; Fol.	Folio
Cwt.	Hundredweight	F.O.B.	Free on board
Cy.	Currency	f.o.c.	Free of charge
		f.o.r.	Free on rail
D.	Denarii (pence): 500	For.	Foreign
D/A	Days after Acceptance; Documents Against Acceptance; Deposit Account	f.p.	Fully paid
		F.P.	Fire Policy
D.B.	Day Book	F.P.A.	Free of Particular Average
D/C	Deviation Clause	Fr.	French; Franc
D/D	Demand Draft	Fr.	Freight
d/d	Days after date; Days' date	Fs.	Francs Swiss
Deb.	Debenture		
Dept.	Department	g.	gramme
Dft.	Draft	G.A.	General average
Dis.	Discount	G.B.	Great Britain
Div.	Dividend; Division	G.M.T.	Guaranteed Mail Transfer
D/N	Debit Note; Delivery Note	Gov.; Govt.	Government
D/O	Delivery Order	gr.	grain; gross
Dols.	Dollars	grs.	grains; gross
D/P	Documents against Payment	Gs.	Guineas
Dr.	Debtor; Drawer		
D/R	Deposit Receipt (banking)	H.M.C.	His Majesty's Customs
d/s	Days' sight	H.M.S.	His (or Her) Majesty's Service
D/W	Dock Warrant	H.O.	Head Office
Dwt.	Pennyweight		
Dy., D/y	Delivery	I.B.	Invoice Book
Dely.		Ier	First (French, premier)
		I/I	Indorsement Irregular
E. and O.E.	Errors and Omissions Excepted	Ins. or Insce.	Insurance
e.d.	Ex Dividend	Inst.	Instant
		Int.	Interest
		In trans.	In transitu (in transit)
		Inv.	Invoice

IOU	I owe you	m/s	Months' sight (i.e., months after sight)
Iss.	Issue	M/T	Mail transfer
J/A	Joint Account	N/A	No advice (banking); New Account (Stock Exchange)
Kč.	Czecho-Slovakian kronen	N.A.	Non-acceptance
Kg.	Kilogramme	N/E	No Effects
Kilo; Kilog.	Kilogramme	N/F	No funds
Kilos.	Kilogrammes	N/m	No mark
Kr.	Kreutzer (coin); Krone; Krona; Kronen	N/N	No Noting
L	Lira, or lire	N/O	No Orders (banking)
£	Pound(s) Sterling	No.	Number
£E.	Pound(s) Egyptian	Nom.	Nominal
£P	Pound(s) Peruvian	Nom. Cap.	Nominal Capital
£T.	Pound(s) Turkish	Nostro	Our account abroad
L/A	Letter of Authority	N.P.	Notary Public; No protest
L/C	Letter of Credit; London Cheque	n/p	Net proceeds
Ld.	Limited	Nos.	Numbers
Ldg., and dely.	Landing and delivery	N.R.	No risk (insurance)
Led.	Ledger	N/S	Not sufficient (banking)
£g	Pounds sterling	N.S.	New Style; New Series
Li	Lira, Lire	o/o	per cent.
L.I.P.	Life Insurance Policy	o/oo	per mille
Lit	Lire (plural)	O/a	On account of
£ s. d.	Libra, solidi, denarii (pounds, shillings, pence)	Oc. B/L	Ocean Bill of Lading
Ltd.	Limited	O/d	On demand
Loro	Their account	O/D	Overdraft
M.	Thousand, Monsieur	O.P.	Open Policy (insurance)
-/m.	Thousand (as 20/m)	O.S.	Old style
m.	metre; mark(s)	Oz.	Ounce
M/a	My account	P/A	Power of Attorney; Particular average
M/C	Marginal Credit	P/A	Private Account (book-keeping)
M.D.	Memorandum of Deposit	P. and L.	Profit and Loss
m/d	Months' date (i.e. Months after date)	P/C	Price Current; Petty Cash
Mdse.	Merchandise	p.c.	Per Cent
Mem.; Memo.	Memorandum	P.C.B.	Petty Cash Book
Mil.	Milreis	Pd.	Paid
Min. B/L	Minimum Bill of Lading	Per ann.	Per annum, by the year
M.I.P.	Marine Insurance Policy	Per cent.	Per centum (by the hundred)
Mks.	Marks (coin)	Per contra	On the other side
M/L	Moneda Legale (page 605)	Per pro	Per procuracionem (on behalf of)
M/N.	Moneda Nacional (page 605)	pf.	pfennig or pfennige (plural)
M.O.	Money Order	Per Mille	per thousand
M.O.O.	Money Order Office	Pm.	Premium
Mo.	Month	P/N	Promissory Note
Mos.	Months	P.O.	Post Office; Postal Order
M/R	Mate's receipt		

Prem.	Premium	St.	Sterling
P.O.D.	Pay on Delivery	Std.	Standard
P.O.O.	Post Office Order	Stg., Ster.	Sterling
p.p.	Per procuration	T.	Tons; Tare
Pref.	Preference or preferred	thl.	Thaler (German coin)
p.pro	Per procuration	Thro' B/L	Through Bill of Lading
Pro forma	As a matter of form	T.M.O.	Telegraph Money Order
Pro tem.	Pro tempore; for the time being	T.O.	Telegraph Office
Prox.	Proximo; of the next month	Tonn.	Tonnage
Pta; psta	Peseta (Spanish coin)	T/q.	Tale quale; <i>tel quel</i> (exchange)
P.X.	Please exchange	T.T.	Telegraphic transfer
qy	query	U.K.	United Kingdom
R.	Rupees; Rouble	Ult.	Ultimo (of the last month)
R/D	Refer to Drawer (banking)	Via	By way of
Re.	Rupee	Vol.	Volume
reg.; regd.	Registered	Vostro	Your account with us
Rm.	Reichsmarks	v.v.	Vice versa
Ro.	Rouble(s)	W.P.A.	With particular average
R.P.	<i>Réponse payée</i> (reply paid)	Wt., wgt.	Weight
Rs.	Rupees	W/W	Warehouse Warrant
Rx.	Ten rupees	x.c.	Ex coupon
\$	Dollars	x.d.	Ex dividend
s.	Shilling; sou	x. in.	Ex interest
s/c	<i>son compte</i> (his or her account)	x. new	Ex new shares
Sh.	Share; shilling	zl.	Zloty
Shipt.	Shipment	&	And
Shr.	Share	&c.	And the rest, and so on
S/N	Shipping Note	#	Number(ed)
Sov.	Sovereign		
Sovs.	Sovereigns		
S.P.	Supra Protest		

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